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ORIGINAL LECTURES.

VERSIONS AND FLEXIONS OF THE UNIMPREGNATED UTERUS.

A Course of Lectures delivered before the Boerhaavian Society.

BY ELY VAN DE WARKER, M.D.,

OF SYRACUSE, N. Y.; FELLOW OF THE AMERICAN GYNECOLOGICAL SOCIETY.

LECTURE IV.

SYMPTOMS.

IT will aid us in the study of the most difficult part of our subject to make two great groups of the symptoms;—those that relate to the uterus and ovaries, and those referable to near parts.

A. Symptoms referable to the uterus and ovaries.

a. Disturbance of function. 1. Menstrual irregularity. In the developmental form of flexion menstruation is often both scanty and irregular. The two conditions are quite generally associated. This results less from an impoverished condition of the blood than from an under-development of the uterus and ovaries. In a uterus of impaired size menstrual congestion is defective, and the secretion of the uterus, if present at all, is proportionately scanty. When chlorosis is present at the same time the menstrual function is often suspended, or is scarcely evident.

In acquired forms of versions and flexions, amenorrhœa may be due to impoverished blood (Sommer, Rockwitz). Many authors (Trier, Cackner, Hueter) express the opinion that in flexions the menstrual secretion is not only increased, but extends beyond the term of the period. The intervals between the menstrual periods were irregular,—as frequently shortened as prolonged. Such cases as these were often attended by a fixed pain in the regions of the sacrum and hypogastrium (Scanzoni).

Scanty menstruation is symptomatic of some varieties of flexions. In old displacements, due to shrinking in one or both round ligaments, and in those caused by adhesive exudation upon the peritoneal, anterior uterine surface this symptom is present (Martin). The same menstrual characteristic prevails, as a rule, in versions or flexions caused by arrest of development in either uterine wall. Menstruation is very short, as a rule, in flexion of the cervix; and the contrary in flexion of the body of the uterus. In cases of long-standing retroversion, or in which the circulation is very much obstructed, menstruation is very commonly irregular, painful, and scanty (Emmet). Between ante- and retroversion no practical difference is observed; thus, the last-named author observed that in anteversion, menstruation was too free in 18 per cent., scanty in 20, and unchanged in 63 per cent.; and in retroversion, 13 too free, 17 scanty, and unchanged in 58 per cent. Flexions were noticed to exert a greater influence on the regularity of menstruation as to time. In flexion of the cervix 15 per cent. were regular and 12 per cent. never regular; in anteflexion 22 per cent. were regular, 9 per cent. irregular, and in retroflexion 10 per cent. regular, and 3 per cent. irregular. Nothing symptomatic can be inferred from this, for 9 per cent. of Emmet's total of cases were irregular as to time, fruitful and sterile alike. It is evident that Emmet mistakes cause for effect when he says that "want of regularity seems to have been some bar to fruitfulness."

2. Dysmenorrhœa was observed by Emmet to exist in 32 per cent. of the cases of anteversion, and in 34 per cent. of retroversion. In retroflexion the same condition was noted in 35 per cent., based upon a total of 28 cases, and in anteflexion 68 per cent. of the cases showed the same symptom. These ratios are based upon too small totals to give anything more than probabilities. Painful menstruation was noticed in 152 cases of flexion of the cervix, of which 59+ per cent. had pain at the beginning, 9+ per cent. had pain during the flow, and 30 per cent. were free from pain. Emmet remarks, that in flexion of the cervix pain at the beginning of the flow was the rule, and during the flow the exception. Emmet's tables show that the existence of pain at any time during the flow had but little influence upon the duration of menstruation.

Dysmenorrhœa may be an almost invariable attendant on certain forms of versions and flexions. In the different groups described by Martin it was observed from the beginning of the function in versions or flexions due to defective development or contraction in one or the other uterine wall. One-third of the cases in this group showed stenosis of the canal of the cervix. In old-standing cases of anteversion or anteflexion due to defective involution of the posterior uterine wall, dysmenorrhœa was very commonly noticed; while in the opposite forms of displacement due to the same cause operative upon the anterior wall, this symptom was not so frequently present as in other groups of flexion. In cases involving fixation, as in anteversion or flexion caused by contraction of one or both round ligaments, or by exudation on the anterior uterine wall, and in the opposite forms of displacement due to contraction of the ligamenta pubo-vesico-uterina, or of the anterior vaginal vault, and in those the result of contraction of the ligamentum ovarii with fixation, painful menstruation was the rule. In the latter group the vaginal portion was often small, and in those who had never borne children stenosis of the cervix was present, which may have been a factor in this result.

The condition that leads to dysmenorrhœa in flexions seems clear enough at the first glance, yet good authorities differ upon this subject. Routh states that it is only when the fundus is inflamed that pain in menstruation is present, and that in congenital (developmental) flexions no pain is present. Squarey believes that the pain indicates obstruction rather than flexion, and presumably in the absence of stenosis of the canal of the cervix, the dysmenorrhœa depends upon fixity of the fundus with reference to the cervix. In such cases any attempt

to lift the fundus causes great pain. A reflex neuralgic element enters into the composition of the pain of menstruation in flexions or versions, which precedes menstruation two or three days, and occurs in the stomach, back, loins, or thighs, sometimes attended by vomiting and headache (Squarey).

Sommer, in explanation of the cause of flexion dysmenorrhœa, assumes a venous stasis of the uterine parenchyma, due to an obstruction of the circulation caused by the stretching of the broad ligaments; and that this condition is greatly augmented at the menstrual periods, at which time there is, habitually, a hyperæmia of the whole sexual apparatus. The onset of hemorrhage in consequence of the rupture of the capillaries of the uterine mucous membrane, relieves the venous hyperæmia. With a free escape of the retained fluid, the pain ceases at this stage; but, in case of obstruction, the contents of the uterus are forced out by strong expulsive efforts. In the highest degree of flexion, at the beginning of the menstrual process, the pressure in the distended cavity causes an increase in the obstruction of the cervical canal; but as the accumulation of blood in the cavity of the organ continues, the distending force tends rather to straighten the axis of the uterus, and thus a more easy escape of the uterine contents is permitted. Sommer's explanation is partly corroborated by Emmet's observation that painful menstruation is the rule in retroversion. Hueter says that from this cause the uterine axis may not only be straightened, but the body of the organ distended to such an extent that it cannot be retained in the cavity of the small pelvis—a result that seems doubtful. The escaped blood may be either fluid or coagulated. Rockwitz believes in this rectification of the uterine axis by menstrual distention. A strong degree of uterine corporeal congestion, and consequent expansion of the parenchyma of the organ and compression of the nerve-fibres, may be a further cause of flexion dysmenorrhœa. Of equal importance in explanation of dysmenorrhœa is the hyperæmia of the peritoneal covering of the inner genitalia when covered by the products of adhesive inflammation. Every increase of the hyperæmia due to menstrual congestion may tend to develop more or less acute local peritonitis, and which, by itself, may be a source of pain.

3. Sterility and abortion, widely different as they are in a physiological sense, are yet closely related as symptoms of versions and flexions of the uterus. All authors admit the importance of these uterine malpositions as causes of sterility and abortion. Gardner, who sneeringly speaks of these dislocations as defined by a nomenclature more exact than useful, nevertheless gives them importance as causes of these conditions. One of the latest writers on sterility, Mayrhofer, gives these displacements but imperfect mention.

Persistent sterility is among the few conditions that may be absolutely symptomatic of a flexion or version of the uterus. Emmet, in his recent work, which must be regarded as the most extensive and scientific embodiment of an individual experience extant in gynecic literature, has tabulated his experience upon the relations of sterility to flexions. In flexions of the cervix among married women, the sterility was nearly total—94 per cent., and more than half with anteflexion of the body were unfruitful. Of 100 cases of retroflexion observed by Hewitt, 12 exhibited absolute sterility; and of 135 cases of retroflexions, 45 were sterile. Martin regards sterility as total in certain groups of versions or flexions. In the group defined by defective development, or contraction of the posterior uterine wall, and in anteversion or flexion due to the same conditions of the anterior uterine wall, all married cases were infertile. The subjects of these two groups were small, weak women. In another group of displacements, caused by extrauterine pressure on the posterior wall of the organ, sterility was the rule.

Abortions are intimately blended with the etiological relations of these displacements of the uterus; and that in consequence of versions and flexions abortions are produced, is an opinion held by Meissner, Siebold, Mundé, Hensley, Kiwisch, Rockwitz, Sommer, Picard, Klob, Hueter, Hewitt, and many others. According to Hewitt's statements, abortions are more frequent in anteflexion than in retroflexion. In the developmental flexion, abortions are the direct outcome of mechanical causes, since the small and unsymmetrical uterus cannot expand without exciting inhibition on the part of the contracted ligaments, thus causing early expulsive uterine efforts. Hueter traces this mechanical factor to the production of abortions in the acquired forms of versions or flexions. The fact has already been stated that in these dislocations of the uterus the flow of venous blood from the organ is difficult in the unimpregnated uterus, and so much the more—reasons Hueter—is this the case in the impregnated condition. By this mechanical hyperæmia the uterus is rendered heavier, and the degree of flexion more acute, resulting in a passive congestion which gives occasion to a separation of the uteroplacental attachment, an abortion resulting in due course. In the early weeks of impregnation, the uterus tolerates a considerable degree of retroversion, and which may, to a certain extent, be regarded as normal.

4. Impotency, while it may exist as the direct outcome of versions or flexions of the uterus, will not, from the nature of the symptom, appear among the subjective evidences of these dislocations of the organ, except on careful examination. In the developmental flexion, the absence of sexual desire seems a necessary result of the defective development of the whole genital apparatus. It may be said to be almost universally present in those cases in which the subject is pale, slight, and of low vitality; but even in well-developed women this symptom is often present, but rarely complained of, in cases of versions or flexions of long standing, in which the health has given away before the disturbance of the general nervous system. Martin observes that, in the group of flexions or versions characterized by defective development, or contraction of the posterior uterine wall, sexual desire is usually remarkably slight. This, no doubt, holds equally true as to the forward displacements, due to the same conditions, of the anterior wall.

5. Dyspareunia, a term Barnes has invented to define painful sexual intercourse, is frequently present as a symptom of versions, or flexions, and especially of the backward variety. This is generally due to the male member impinging upon the hypersensitive posterior uterine wall. This symptom is often wanting, however, in cases in which from the exquisite tenderness of the parts it ought, theoretically, to be present. This may be due to the intense emotional exaltation at-

tending the act; or, as has been already suggested, to the erectile function of the uterus, and the consequent rectification of the dislocated axis of the organ. The extent of the vagina is often encroached upon by an extremely depressed fundus occupying the posterior vaginal pouch, interfering with the copulative act. In case fixation exists, the act may be nearly impossible. In developmental flexions and versions the act is often distasteful, if not painful, owing to the faulty development of the vagina. Martin has noticed that in retroversions or flexions caused by contraction of the ligamenta pubo-vesico-uterina, or by contraction of the anterior vaginal vault, in cases that had existed before marriage that relation was not well tolerated.

b. Hemorrhage, in the form of menorrhagia, or metrorrhagia, is a symptom of very general application in uterine disease. Barnes believes that the conditions which lead to hemorrhage from the uterus are of great etiological value in versions and flexions, and, consequently, have more or less of symptomatic bearing upon these displacements. Many authors, already cited, have expressed the opinion that in these uterine deviations the menstrual secretion is not only increased, but prolonged beyond the normal limits of the period. Scanzoni states that a large number of cases of flexions first declare themselves in this manner (Hueter). According to Kiwisch, the menorrhagia, or metrorrhagia, is more frequent and considerable in retroflexions than in anteflexions, although in the latter it is often an important symptom. These symptoms defined in part on the relaxation of the uterine tissue, and in other instances on the collection of blood in the uterine cavity above the seat of the flexion, and consequent distention of the walls of the organ—a state favorable to hemorrhage. In these cases hemorrhage may become aggravated to such an extent as to become dangerous to life. These attacks may be brought on, or increased, by exertion or mental disturbance. The cause of the hemorrhage Sommer has explained by stretching of the broad ligaments causing a venous obstruction and consequent blood stasis in the uterine parenchyma, and that this condition is greatly augmented at the menstrual periods. In the versions or flexions due to defective involution of either uterine wall, hemorrhage is very generally an important symptom. In one of these groups this symptom was present in 84 out of 205 cases. Martin believed that many of these cases of flexion hemorrhage were caused by erosion and relaxation of the mucous membrane of the uterine canal. In forward displacements, caused by extrauterine pressure on the posterior wall of the organ, chronic hemorrhage and profuse menstruation were frequent symptoms. Cases of retroflexion, or version, caused by contraction of the ligamentum ovarii, and by the fixation of the latter, exhibited this symptom in a large proportion. Hemorrhage, in any form, is of extreme rarity as a symptom of the developmental flexion or version, and when present it is generally due to accidental conditions.

c. Symptoms due to inflammatory conditions existing in the pelvic cavity that hold etiological relations to versions or flexions have more or less value in defining these displacements. Inflammatory conditions that do not hold these relations have too remote connections to be considered here. The same may be said of adhesive inflammation of the pelvic peritoneum, which, often existing causatively to the displacement, has too general a bearing to be considered. The sense of pain in the region of the sacrum in anteflexion, and in the lower bowels in retroflexion, is explained by Hueter as the result of strain and tension upon the ligaments. This explains very perfectly the increase in this pain by efforts at defecation, or during the menstrual period, at which time, by the increase in the size and weight of the uterus, traction upon the ligaments is augmented, to the great increase of the pain. The larger and heavier the uterus is, and the less the ligaments respond to the strain put upon them, the greater proportionally is the pain. Numerous authors speak of the pressure, weight, and sense of fulness in the pelvis complained of in versions and flexions of the uterus. This usually occurs when the displaced organ is in an enlarged condition, and which enlargement is generally in the uterine parenchyma and complicated with chronic metritis. In connection with this condition, if the vagina is relaxed so that a prolapsus of the uterus is possible, the sense of weight or bearing-down is explained. As you will have noticed, it is impossible to regard this group of symptoms except in many conditions other than those of versions and flexions of the uterus. In old or recent versions, or flexions caused by defective involution of the uterine wall, the result of puerperal processes, the majority complain of increased sensibility on pressure in the hypogastrium and groin, associated oftentimes with painful weight and bearing down. In displacements due to contraction of the ligamentum ovarii with fixation, Martin speaks of pain and tension in the groin of the affected side.

d. Catarrhal conditions of the uterus and tissue-changes like those noticed in the last group of symptoms (*c*), relate to versions and flexions of the uterus, but in an indirect manner. The factors leading to a hyperæmic state of the mucous lining of the uterine cavity have already been stated, and in menstrual periods result in menorrhagia, while in the intervals a morbid amount of mucus is secreted. This blennorhœa, attended with pain, has been regarded as symptomatic of flexions by Meissner, Colombat, Kiwisch, Sommer, Rockwitz, Trier, Depaul, Valleix, Detschy, West, Scanzoni, Säxinger, Hueter, Hewitt, and others. Quantitative and qualitative changes in the catarrhal secretion are, according to Kiwisch, very considerable. Beigel, however, after a very careful examination of these discharges, does not regard any change as peculiar to flexions. Occasionally it appears as a serous discharge, and becomes now and then so profuse that it resembles a hydrorrhœa, and at other times pus. When the secretion is retained in the uterine cavity above the seat of the stricture, and distends the walls of the organ, pain is caused, which quickly disappears on the expulsion of the excess of the secretion. Oftentimes there is an interchange of the catarrh with the menstrual secretion. In many cases the blennorrhœa continues with the catamenia, and profuse menstruation and copious blennorrhœa is the form; or, when the blood escape is small, the latter discharge is profuse. When the discharge is very considerable its expulsion may be attended with uterine colic. The escape of the blennorrhœal secretion is often attended with almost uncontrollable itching and burning in the external genitals, and now and then by erosion of the vagina and outer

parts. The relaxation of the mucous membrane is always attended with an exfoliation of the epithelium, and which furnishes the occasion for erosions, excoriations, and ulcers. Sommer distinguishes in these discharges two forms, namely, that of Kiwisch, the phlegmorrhœa uteri, a hypersecretion of the uterine mucous membrane without essential qualitative changes; and, secondly, the catarrh of the uterine mucous membrane with changes in form and composition. The seat of the phlegmorrhœa is in the cavity of the body of the uterus, and is explained by the author as due to the proportionally excessive hyperæmic condition of the body to the neck of the organ. As the neck is equally involved in flexions with the body of the organ, the congestion of this part, owing to its glandular activity, exceeds that of the body, and the hypersecretion of the uterine flexion is mainly that of the cervix. When the hypersecretion is an expression of the disease of the entire uterine cavity, the consequences are more serious than when the disease is confined to the neck. In the first case the mucus is confined to the cavity of the body of the uterus, and escapes with the symptoms of uterine colic; while in the second case the escape of the mucus is not retarded. Sommer must be in error when he states that the uterine mucus has in these cases lost its physiological acid reaction and become alkaline.

Martin regards the morbid hypersecretion as due, not to the flexion, but to the frequently attending endometritis. He adduces numerous cases, in which long-existing flexions, as in those of multiparæ, were unattended by catarrh. Martin states that the opinion of Scanzoni and Rockwitz, that the addition of hemorrhage to the catarrh is a necessary attendant of uterine flexions, is not proved.

Nothing in ulcerative processes, granular erosions, or papillary hypertrophy of the os externum is symptomatic of versions or flexions of the uterus. In displacements backwards caused by contraction of the ligamenta vesico-pubo-uterina or of the anterior vaginal vault, Martin noticed very frequently a narrow rim of granular erosion about the external os. Anteversions or flexions caused by delayed involution of the posterior uterine wall, either of long standing or recent creation, were observed to be attended by old, or recent erosions or ulcerated condition of cervix (ulcera puerperalia). While these conditions may hardly be regarded as accidental, yet they do not define in any way the flexed uterus.

e. Symptoms of versions and flexions of the uterus referable to the ovaria are of doubtful value in this relation and when purely of that origin are rarely met with. Dr. Routh alludes to a very painful form of retroversion, in which pain in the fundus of the uterus was most acute, attended with but little, if any, congestion or inflammation. Such pain was reflected from the ovary, the fundus uteri being supplied with a nerve-branch from the ovary, like the knee pain in hip-joint disease. Priestley asserts that the pain in flexions is largely due to ovarian neuralgia. A fixed, dull pain in the ovarian region is not unusual in versions and flexion of the uterus, especially of the backward variety. Such a pain is, however, not rare in many other forms of uterine disease.

f. The vagina is sometimes prolapsed in old anteversions, or flexions, the result of defective involution of the posterior uterine wall. The prolapse involves the anterior wall of the passage, and is, now and then, complicated with cystocele. This disappears on the occurrence of a subsequent pregnancy. Twenty per cent. of the cases of retroversions, or flexions, caused by the above condition of the anterior uterine wall observed by Martin, were complicated by colpitis, but due, the author believes, to adventitious circumstances. Pruritus vaginæ, or vulvæ, is often noticed in versions or flexions of the uterus, and when not a purely hysterical symptom, is the result of the irritation of the mucous membrane of the passage by morbid uterine secretion. Martin has observed in recent cases of anteflexion, caused by delayed involution of the posterior uterine wall, pain and tenderness in the anterior portion of the labia, more severe on one side than the other.

In the concluding lecture upon this branch of the subject, we shall analyze those symptoms due to disturbance of near parts.

ORIGINAL ARTICLES.

CONTINUOUS INHALATION AS PRACTISED WITH THE YEO RESPIRATOR. TWO YEARS' EXPERIENCE.

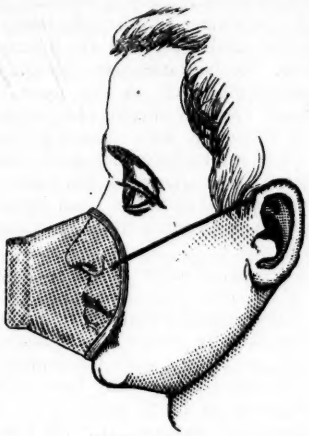
BY SOLOMON SOLIS COHEN, A.M., M.D.,

DEMONSTRATOR OF PATHOLOGY, AND CLINICAL ASSISTANT IN THE DEPARTMENT FOR DISEASES OF THE THROAT, PHILADELPHIA POLYCLINIC: ASSISTANT IN THE OUT-PATIENT MEDICAL DEPARTMENT OF THE JEFFERSON MEDICAL COLLEGE HOSPITAL.

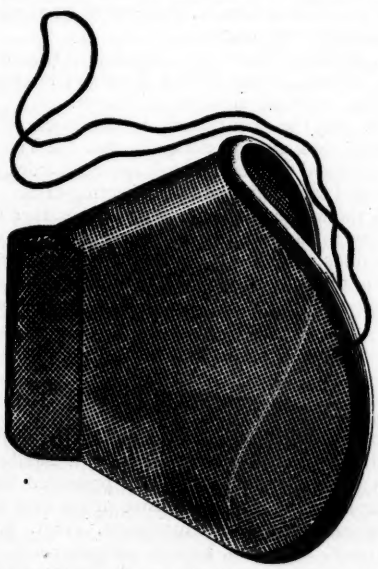
CONTINUOUS inhalation of a volatile medicament by means of an apparatus worn over the nose and mouth—a so-called "*respirator*"—is by no means a novel idea; but the cost and clumsiness of most of the appliances devised for the purpose have until recently prevented this method of treatment from being carried out upon a sufficiently extended scale to afford a reliable test of its efficiency. Dr. I. Burney Yeo, of London, described and figured in the *British Medical Journal*, for July 1, 1882, a respirator constructed of perforated zinc bound with chamois skin, shaped to cover both nose and mouth, which carries a sponge upon which the medicament desired to be inhaled can be dropped, and which is retained in position by means of a pair of elastic loops passed around the ears. The lightness of this appliance, its cheapness, and its cleanliness, commend it as the best device for the purpose yet offered to the profession. Until within a few months it has been impossible to obtain the respirators in this country, and those used in the cases upon which this article is based, were imported. Messrs. Wyeth & Bro., of this city, are now manufacturing them, however, with a slight change in style suggested by Dr. J. Solis Cohen. This modification consists in placing the sponge within a little cage formed by a fold of zinc in the front of the respirator, instead of retaining it in position by elastic bands. The shape and size of the respirator, as made by the Messrs. Wyeth, and the manner of using it are shown in the annexed cuts.

The material of which the respirator is made being pliable, it can be accurately fitted to the face. The shape being adjusted, the sponge is wetted with hot or boiling water, and the medicament dropped

upon it. The respirator is then fastened around the ears, and worn for such period as may be directed by the physician, or practicable for the patient. In many cases, the patient being engaged in his business occupations during the day, will consent to wear the respirator at night only. Some patients can sleep in them, others find it impossible to do so. The



following are the substances recommended by Dr. Yeo for inhalation: creasote, liquefied carbolic acid, spirit of turpentine, eucalyptus oil, terebene, spirit of camphor, solution of tar in rectified spirit, tincture of benzoin, and tincture of iodine. He uses of these five minims, either alone or mixed with an



equal quantity of spirit of chloroform. Of course, any drug volatile at ordinary temperatures can be employed, but the list given by Dr. Yeo embraces nearly all which have been found of value in daily practice. I would add to it, however, chloroform, iodide of ethyl, and the alcoholic solutions of thymol and of menthol.

Dr. Yeo's principal resort to treatment by the respirator has been in cases of phthisis, in which he has desired to keep up a continuous antiseptic inhalation; and the drug which he has found of the most service is creasote. From this treatment, in conjunction with proper hygienic measures and constitutional medication, he has obtained excellent results, some of which he has reported.[1]

Dr. J. Solis Cohen and myself have tested the method during the past two years at the German Hospital, at the Philadelphia Polyclinic, and in private practice. The cases selected for this purpose number more than one hundred and fifty. While our results do not justify the endorsement of the plan as in any sense curative of phthisis, they have convinced us that much comfort may be afforded to patients past cure; that distressing symptoms may be quickly relieved, and in some instances entirely removed; and that recovery may be aided in cases affording reasonable basis for favorable prognosis. In other diseases of the respiratory organs, there has seemed to be a hastening of the favorable termination in some instances, and a marked degree of relief in others; even in chronic and incurable affections.

Without detailing histories of cases the following general results may be recorded:

I. *In Phthisis.*—In cases with slight laryngeal involvement, the inhalation of terebene (ten drops, renewed every second or third hour) as continuously as possible during the day, with the addition of chloroform (five drops at bedtime) during the night, has seemed to allay the uncomfortable sensations of dryness and heat in the throat, and to restrain irritative cough. The relief has been particularly marked, and the gratitude of patients correspondingly great in cases in which, prior to the institution of treatment, sleep had been disturbed by violent spells of coughing two or three times during the night. In those cases in which the absence of a hemorrhagic tendency has permitted the use of daily inhalations of compressed air, after the increased coughing and expectoration caused by the loosening of retained and impacted secretions has subsided, there has been almost entire cessation of coughing. At most, in some instances, there has been a "clearing-out" cough on arising in the morning, and in but one or two instances has an unproductive cough remained during the day or night.

In dispensary practice, oil of turpentine (twenty drops) has been prescribed instead of the terebene, with almost equally satisfactory results. In some cases, however, especially those in which there has been organic lesion or functional disturbance of the kidneys, terebene and turpentine have caused distressing symptoms referred to the back of the head and to the ears, and apparently due to cerebral congestion

Many patients, even among those whose disease has already proved fatal, have declared that they could not be induced to part with "the little machine." In one case, which I shall at some future

[1] British Med. Journ., Jan. 12, 1884.

time report in full, the patient, a girl of eighteen years, complained that the dose of chloroform (three minims) ordered at bedtime, "smothered her." On increasing the dose to five minims, the unpleasant sensations disappeared, and she fell almost immediately, upon retiring, into a refreshing sleep, undisturbed by the cough that had formerly harassed her throughout the night. While it is only fair to add that in this case there was a constant and remarkable improvement in every respect under constitutional treatment, yet the relief to cough preceded other favorable changes.

In cases with marked laryngeal disease, the amelioration produced by treatment with the respirator, while decided, has not been so great as in the preceding group of cases. These patients have, as a rule, done better under creasote than under terebene; and where there has been extensive ulceration, eucalyptol seems to have done more good than either of the other drugs. Eucalyptol, however, has been on the whole a very disappointing and unreliable drug, failing utterly in some instances, and as yet, without affording any positive indications as to the conditions in which it is likely to prove of service. Whatever drug has been employed in this group of cases, whether terebene, turpentine, thymol, creasote, or eucalyptol, the best results have been obtained from its admixture with chloroform or with spirit of chloroform; chloroform alone being used at night.

II. *In Bronchitis.*—In subacute and in chronic bronchitis, good results have been obtained from the use of the Yeo respirator, worn for an hour or two at a time, during the day and night, with terebene, spirit of turpentine, or tincture of benzoin, as the medicament. In bronchorrhœa and in fetid bronchitis, creasote and carbolic acid have been advantageously employed, either singly or in connection with one of the other remedies. Eucalyptol has been of value in a few cases. Ethyl iodide has given excellent results in cases of profuse bronchorrhœa Even in a few instances of pulmonary gangrene, the fetor has been controlled by this drug, after failure of other remedies.

In most instances, cough has been restrained and expectoration has been diminished in amount and corrected in character; while the subjective relief afforded has often been most gratifying.

III. *In Pleurisy.*—In one severe case of acute pleurisy in which persistent and painful cough was one of the most distressing symptoms, the continuous inhalation of terebene and chloroform (five minims of each) for an hour at a time, three or four times during the day, afforded marked relief.

IV. *In Chronic Laryngitis and Tracheitis.*—In cases of chronic laryngitis in which burning or tickling sensations in the throat, or annoying cough, have constituted sources of distress, terebene, creasote, camphor, and tincture of benzoin have proved very useful. Eucalyptol has succeeded where the other remedies have not answered a good purpose; but has not been at all reliable. It must be used, if at all, in small quantity (two or three minims on the sponge at a time) or well diluted.

The benefit of inhalation by means of the respirator has been most marked in cases of laryngotracheitis characterized by a constant desire to hawk out something that seems to stick in the upper part of the trachea; a purely subjective sensation. In these cases terebene has been chiefly used, but tar has also seemed to be beneficial.

V. *In Nasal Catarrh.*—No extended trial of the method has been made in cases of rhinitis; but a few patients under treatment for other affections, have reported relief to nasal symptoms which had annoyed them for years. In these instances, creasote has been the medicament employed. Acting upon this hint, some half-dozen cases of rhinitis have recently been treated at the Polyclinic with creasote by continuous inhalation. The results have been quite satisfactory. In none of the cases referred to has there been any marked structural change in the nasal passages. In one there was hypersecretion from the glands at the vault of the pharynx.

VI. *In Syphilitic Disease of the Throat, of the Nose, and of the Ear.*—In cases of syphilitic laryngitis, and in a few cases of syphilitic rhinitis, one of the latter being marked by profuse fetid discharges both anteriorly and posteriorly, with involvement of the middle ear, curative results have been obtained by the administration of ethyl iodide by continuous inhalation from the Yeo respirator. In cases of extensive or rapidly spreading ulceration, however, exclusive reliance has not been placed upon this method of treatment.

VII. *In Pertussis.*—Some amelioration has seemed to be produced by the inhalation of tincture of thymol, eucalyptol, tincture of benzoin, creasote, and chloroform in pertussis; but while the relief has been marked in a few instances, the results have not on the whole been very satisfactory.

VIII. *In Hay Fever and Asthma.*—Trial of the method is being made in hay fever and in asthma, but, as yet, no conclusion can be drawn.

IX. It may be mentioned, in addition to the therapeutic uses already detailed, that the Yeo respirator, charged with eucalyptol, has been worn with comfort and satisfaction at the dissecting-table.

Upon the whole, the results thus far obtained from continuous inhalation, in the treatment of the various affections for which it has been employed, justify the warm recommendation of the method to consideration and trial at the hands of the profession.

ON THE TREATMENT OF TAPEWORM.

BY BERNARD PERSH, M.D.,
HOSPITAL STEWARD U. S. ARMY.

DURING a term of service at one of the military posts on the lower Rio Grande, quite a number of patients suffering from tapeworm presented themselves for treatment, and extensive trials were made with various remedies. Turpentine, ether, pomegranate root, male-fern, koosso, salicylic acid, and carbolic acid were employed, but the results obtained were by no means satisfactory, and it was particularly noticed that while a certain remedy would prove effective in one case it would fail in others. The effects of the different anthelmintics were most carefully watched, and the interest taken in the matter

was increased by the fact that the surgeon in charge and myself were affected with tapeworm.

Koosso and carbolic acid gave the best results, possibly for the reason that they were more frequently used than any of the other remedies. Koosso was given in six drachm doses, suspended in water, and followed in two hours by an ounce of castor oil; and of the carbolic acid two grains of the crystals, made into a pill with extract of liquorice, as recommended by Dr. J. S. Bill, U. S. Army, were ordered every two hours until ten pills were taken. If, after taking a dose of oil, the carbolic acid treatment proved unsuccessful, it was repeated next day. Carbolic acid was, however, given in much larger doses, for the same complaint, without producing any disturbance of the digestive organs, or symptoms of carbolic acid poisoning, but even with large doses failures to expel the worm were noticed. I remember the case of a physician suffering from tapeworm, who objected to the administration of the acid in the form of pills and who took three grains every hour in an ounce of brandy until he had taken fourteen doses. He described the effects of the acid as rather exhilarating, and when it was hinted that this was possibly the result of taking a pint of cognac with the acid, strongly objected to the insinuation. However, the exhilarating effects did not extend to the parasite, at least the excitement produced was not of a sufficient degree to make the worm relinquish its hold upon the mucous membranes of the doctor's intestine.

Several years later, while conversing with some medical gentlemen upon the subject, one of them recommended chloroform and croton oil as a most effective remedy in the treatment of tapeworm, and I was particularly impressed with its value, since I had noticed that after administering chloroform or ether to patients they would lose numerous segments or pass large pieces of worm. The day after the remedy was suggested to me, I suspended one drop of croton oil and a drachm of chloroform in an ounce of glycerine, took the whole of it on a full stomach and expelled my uninvited guest in less than an hour after taking the medicine. During the past eight years I have given the remedy, or suggested its administration, in more than twenty cases, with most excellent results. The medicine is best given in the morning before breakfast, and no preparatory treatment is required, excepting half an ounce of Rochelle salt on the evening preceding the removal. The preliminary laxative is not necessary to effect a cure, and it was omitted in several cases, but its administration facilitates the examination of the evacuations, prevents breaking up the worm by hard feces, and allows the parasite to pass more quickly through the intestines after becoming detached.

I have not observed any bad effects from the chloroform, and while in some cases slight drowsiness or giddiness prevailed, these symptoms passed off rapidly by placing the patient in the recumbent position, and they disappeared in most cases before the croton oil commenced to operate. The action of the croton oil is rapid, and increased peristaltic action appears shortly after taking the medicine, and a movement of the bowels takes place in less than an hour. Any tendency to diarrhœa or irritation of the intestines is readily controlled by giving bismuth and opium after the worm is expelled. I am not prepared to say whether a cure could be obtained without the croton oil, but I have seen one case in which the parasite was expelled after taking a drachm of chloroform. It appears plausible that a considerable quantity of the vapor of chloroform may escape from the stomach through the pylorus, thus causing distention of the small intestine, and, in consequence, increasing peristaltic action sufficiently to carry the anæsthetized worm into the large intestine before the effects of the anæsthetic pass off. If the worm has once descended from the small intestine, there is no probability of its returning to its old resting-place, and since the contents of the large intestine are not suitable to sustain the life of the parasite, it is soon expelled with the feces.

In all cases the worm was passed alive, which showed that the anæsthetic was not given in sufficient quantity to kill the worm, but that the effects produced were such as to make it relinquish its hold upon the mucous membrane of the small intestine. For this reason, prompt removal of the worm from the small intestine becomes necessary, and it is therefore safest to combine a drastic cathartic with the chloroform. Nothing is more suitable to accomplish this purpose than croton oil, since it dissolves easily in chloroform, does not add to the bulk of the dose, and is not liable to increase the tendency to vomit, which is sometimes noticed after the administration of chloroform.

In conclusion, it may be proper to state that all of the cases in which this cure was employed, had been treated for tapeworm on previous occasions, and the patients agreed that the remedy was readily taken; that its immediate effects were by no means unpleasant; that the treatment did not leave them prostrated; and, above all, that it was successful.

The Frankford Arsenal,
July 29, 1884.

MEDICAL PROGRESS.

Resection of the Ribs for Pleural Disease.—Dr. A. von Puky, in an article on this subject, in which he gives the history of five cases of this operation, all occurring in adults, draws the following conclusions as to the indications:

1. Thoracocision is indicated in suppurative pleuritis, whether of traumatic or pathological origin. 2. In pyopneumothorax complicating phthisis. 3. In operations for echinococcus tumors.

Thoracoplasty is indicated: 1. In chronic empyema with compression of the lungs and thickening of the pleural membrane. 2. For extirpation of neoplasms. —*Centralbl. für die med. Wissensch.*, August 9, 1884.

Aneurism of Innominate Artery—Ligation of Carotid and Subclavian Arteries.—Mr. J. W. Florance reports the case of a man, æt. 33 years, who came under the care of Dr. J. G. Beaney, at the Melbourne Hospital. The sternal end of the clavicle was displaced upwards and forwards, and rose and fell with the pulsation of the tumor. The tumor extended from half an inch to the right of the right sterno-

clavicular articulation nearly to the opposite left joint, a distance of two inches. Above, it terminated about one inch beyond the end of the displaced clavicle. The pulsation of the tumor was expansile. The cardiac appearances and sounds were normal, save that at the base a rather muffled bruit was heard with the first sound, with accentuation of the second sound. Over the tumor the murmur was distinct. The right radial pulse was much stronger than the left. No difference in the temporal pulses. Pupils equal. Pressure on the tumor caused some dysphagia and a slight cough.

The first part of the distal operation, ligation of the carotid, was done about a month after his admission, the patient making an uninterrupted recovery; as he did from the subsequent ligation of the subclavian, done twenty-four days later. The ligatures were made of kangaroo tendon; and the wound was irrigated with carbolic acid solution. The clinical features in the case are somewhat remarkable, and deserve careful consideration. These are: 1st, the rapid recovery of the patient after undergoing two operations of such magnitude; 2d, the comparatively slight disturbance of the cerebral functions following the application of the ligature to the carotid; 3d, that the arm regained its normal temperature within thirty-six hours after the subclavian had been tied; 4th, the progressive consolidation of the aneurismal tumor; and 5th, the rapid healing of the wounds, the carotid operative wound having united soundly by first intention. The question may be asked, What have been the factors at work in the causation of this arterial lesion? He is a young man, only 33 years of age, and has never suffered from syphilis or alcoholism. He has had frequent acute attacks of rheumatism, and his father suffered much from gout. He is a veterinary surgeon; has often received blows on the chest from restive horses, and has had to use considerable exertion in throwing them for operative purposes; and four years ago he was garroted. There may have been an inflammatory softening of the artery due to rheumatism, which only awaited some mechanical violence, or extreme blood pressure, to dilate the vessel at its weakest point, and so lead to the formation of an aneurism.—*Australian Med. Journal*, July, 1884.

ALBUMINATE OF IRON AS AN EMMENAGOGUE.—Clinical experience, says DR. ALBERT BLONDEL, has shown for several years the necessity of administering albuminate of iron to women with chronic uterine troubles. He has made a special study of its effects in amenorrhœa and dysmenorrhœa, and the results which he has obtained cause him to prefer this preparation almost above any other for treating irregularities at the menstrual period.

We frequently observe in young women, and particularly in young girls, menstrual troubles characterized by a retardation of the flow for two, three, or four months, or even longer. These patients have a sensation of cold in the epigastrium, they complain of digestive troubles, mental hebetude, flushes of the face, insomnia at night, and a frequent desire to sleep during the day, and other well-known symptoms. It is usual in these cases to treat the subjective symptoms symptomatically, and to endeavor to arrest the defibrination of the blood and the cachexia by tonics, iron being very commonly administered, and causing, as we know, a rapid amelioration of the tendency toward congestion of the organs, and retention on the part of the utero-ovarian apparatus. This end is but imperfectly attained, however, if too much iron be given, or if two or three of the preparations be used. The albuminate, however, seems to give far better results than any other preparation of iron, as it is the ultimate form taken by iron before being absorbed by the blood. It may be given with syrup of orange peel, each teaspoonful containing gr. ¼–j.—*L' Union Medicale*, August 2, 1884.

THE ETIOLOGY OF DEAF-MUTISM, AND THE INSTRUCTION OF DEAF-MUTES.—DR. L. W. SALOMONSEN, of Copenhagen, read a paper on this subject at the late meeting of the International Medical Congress. The number of deaf-mutes, he said, is surprisingly different in different countries, varying from 1 in 2000 to 1 in 600. Among the causes of deaf-mutism there are some which may be called *indirect*, which especially relate to congenital deaf-mutism. Such are consanguineous marriages, heredity, alcoholism and fatuity on the part of the parents, and certain telluric and climatic influences.

There are other and more *direct* causes, of especial importance in acquired deaf-mutism, which is very frequent in comparison with the congenital affection. Among the important direct causes scarlet fever is especially prominent. Contrary to what might be expected, an examination of the organs of hearing and voice are generally normal; and consequently the fundamental cause must be looked for in some abnormality of the encephalon.

A comparison of the two methods of teaching shows that the method of articulation gives the best results. The following conclusions were drawn: 1. The primary cause of the majority of cases of deaf-mutism, especially of congenital cases, is, as yet, not known; 2. It appears that the most frequent cause of acquired deaf-mutism is scarlatina; 3. The separation of the classes of deaf-mutes is practicable and useful; 4. The instruction should be by the method of articulation in the great majority of adult cases; 5. The instruction should be compulsory.

SOLUTION FOR INTRAVENOUS INJECTION IN THE ALGID STAGE OF CHOLERA.—The following solution has been advocated by HAYEM as useful for intravenous injection in the algid period of cholera.

℞.—Water, ... fʒxxxj¼.
Sodium chloride,
Sodium hydrate, ... āā℈iv.
Sodium sulphate, ... ʒvjʒj.

Should it be desirable to inject more than one litre of this fluid, Hayem advises that the proportion of sulphate of soda be diminished, so that more than ʒvij℈ij shall not be introduced into the blood at one time. This solution admirably preserves the elements of the blood.—*Gaz. méd. de Paris*, September 13, 1884.

SUBCUTANEOUS LIGATION OF THE BRACHIAL ARTERY.—DR. RAIMONDO CANNIZZARO reports the case of a man, æt. 22 years, who received a stab-wound in the right forearm, passing between the bones and wounding the ulnar and interosseous arteries. Subcutaneous ligation of the brachial artery was performed under antiseptic precautions, and the wound dressed antiseptically, with the result that healing took place by first intention.—*Lo Sperimentale*, June, 1884.

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SATURDAY, OCTOBER 11, 1884.

THE ANTIPYRETIC TREATMENT.

IT has been a good many years since the antipyretic treatment by baths was suggested by LIEBERMEISTER, and yet it cannot be said to have established itself in this country, and it is doubtful whether the cold bath is as much used among us in the treatment of high temperatures to-day as it was six or eight years ago.

Liebermeister has taken advantage of the Copenhagen Congress to reiterate his views on this subject before the Section on Medicine, which, in view of their practical bearing, should interest our readers. He first considered the relation of the antiseptic to the antipyretic treatment, between which there is no opposition. The antipyretic treatment is characterized as expectant-symptomatic, since it has to do with the treatment of a symptom which, with its consequences, is so often the cause of death in acute febrile diseases, and especially typhus and typhoid fevers.

The pith of the antipyretic treatment consists in the removal of heat from the body by means of cooling baths. Although regard should be had, in the selection of cases, to the degree of temperature and its duration, the duration and individuality of the disease, the powers of resistance in the patient and his individual organs, yet, as no harm can accrue from the baths, it is safe to err on the right side, the sins of omission being far more numerous than the sins of commission. It matters not much how the refrigeration is accomplished if it is effectual, and Liebermeister's method is with baths at 68° F. or under, and of about ten minutes' duration. The antipyretic remedies, so called, including quinine, sodium salicylate, kairin, and antipyrin, he regards as adjuvants; and, although useful as such, are often employed primarily because of the little trouble involved in their use, when the cold baths would have been more efficient. Liebermeister considers salicylic acid contraindicated when there is a weak heart.

The baths should be used whenever the temperature in the axilla reaches 102° F., or 103.1 F. in the rectum,—generally between 7 in the evening and 7 in the morning; between 7 and 11 if the temperature reaches 104° F. in the rectum; between 12 and 3 if it reaches 103.1° F.; and between 4 and 7 if it is 102° F. During the day the temperature is usually lower, but the baths may be used if these high temperatures are reached. Experience has shown, too, that fevers with decided remissions are less dangerous to life, and there is less need of the antipyresis.

The antipyretic treatment should not alone be relied upon, but every care should be taken in the selection of diet and other measures tending to place the patient in a condition favorable to recovery. Nor should the antipyretic method be pursued to the exclusion of the specific treatment, such as quinine in malarial fevers, mercury in syphilis, salicylic acid in rheumatism, and calomel in typhoid fever, dysentery, and cholera, although it is admitted that the theoretic estimate placed upon the specific treatment is not always sustained by experience.

Liebermeister claims as much as ever for his treatment, and contends that his results will be sustained by experience with these measures in private and hospital practice. He tells us that there are places in Germany where this treatment is so thoroughly esteemed by the popular mind that the physician who would dare to attempt to treat a severe case of fever without it would be dismissed. On the other hand, we are quite certain that there are places in this country in which the physician would be dismissed who attempted to treat a case by these measures. It is a sad commentary on medicine that such diverse views are held upon a method of treatment upon which the lives of thousands of sick hang.

THE PRESIDENT'S ADDRESS AT THE AMERICAN GYNECOLOGICAL SOCIETY.

ALTHOUGH the Chicago meeting of the American Gynecological Society does not seem to have been a remarkable success, either in the attendance, or in the general character of the papers read, we are glad to say the President's address was not condemned to be "read by title," and that it was worthy of the man, and worthy of the organization, as will be seen by the abstract presented in this issue of THE NEWS.

DR. ALBERT SMITH began with brief reference to the extension of the gynecologist's work, and the improvement made in that work. It is natural for a man heartily believing in, and earnestly pursuing a special department of professional work, to magnify his office; and when the office is of such importance

as that of the gynecologist, and when he so ably fills it as Dr. Smith does, we can find no fault with his statements.

He next referred to "the prurient tendency of many articles in our medical journals." Undoubtedly pruriency, whether in seed, bud, flower, or fruit —whether tendency, initial or perfect development —is not to be commended, but to be condemned whether found in medical literature or anywhere else. But directly opposed to pruriency is prudery, and we are not quite sure but there may be as much of the latter to be condemned as of the former. One cannot draw a hard and fast line between what the old rhetoricians called the *dicenda* and the *tacenda*, so much depends, not upon the things discussed, but upon the time and place, the motive, the manner, and the end of discussion. We cannot ignore the fact that certain sexual relations connected with social and individual purity, with human health and happiness, relations which were considered by the wisest of lawgivers and the oldest of historians, Moses, and by the greatest of Christian theologians, Paul, are at times the legitimate subjects of medical discussion. And such discussion can be so conducted that it will no more contribute to lewdness than, according to Dr. Samuel Johnson, did the writings of Prior—the former declaring that if Lord Hales found anything of that kind in those writings, he "must be more combustible than other men."

If we were to reject from investigation all that is obscene, taking the word in its etymological meaning, we should not dare to speak of evacuations from bowel or bladder; undoubtedly such things are not clean, but to label them as morally unclean, is to push prudery to utter absurdity. While then escaping Scylla, let us also avoid Charybdis; rejecting all reference to sexual relations, when such reference excites lewd desires or prurient thought—never making those relations the subject of coarse jests, or filthy jokes—let us at the same time not hesitate to consider them in a proper way and at a proper time, when such consideration can bring good, or lead to the avoidance of evil. Dr. Smith does not say a word too much in favor of the refined delicacy and the chivalric bearing which the gynecologist should manifest toward that sex which is at once the purer, as well as the gentler.

Passing from these preliminary topics Dr Smith enters upon the subject of his address *The Present Aspect of Puerperal Diseases*. While the literature of this subject, even in recent years, is vast, and one is liable to get confused amid the multitude of teachers and the multiplicity of opinions, let us be grateful for the calm discussion of it by one of large experience, patient study, and wise judgment. We will not pledge ourselves to endorse all the views that Dr. Smith presents, for in the very retention of the term puerperal fever, there is some liability, as we think, to the misleading of the professional mind, but we do not hesitate to say that he helps to bring order out of the chaos of accumulated information, and establish some firm principles.

Dr. Smith justly regards the subject as one of very great importance, it being of signal consequence that the young practitioner should have clear ideas of the pathology, and especially of the etiology of the disease. Nevertheless, we must say, until the old practitioners come to better agreement as to these questions, how much clearness of vision will be granted the eyes of the young? The New York discussion, to which Dr. Smith refers, and the many papers which that discussion evoked, proved irreconcilable differences of theories and therapeutic means; even one of the chief participants in the debate changed some of his therapeutic means within a few weeks, between the beginning and the end of the debate. The outcome of all our knowledge at present seems to be that the disease, in its various forms, depends upon a single infectious principle

It is comparatively easy to explain the different morbid manifestations as Siredey does, by supposing that the morbid agents, though having the same origin, and the same virulence, do not find in all women conditions equally favorable for their development, and then they are attenuated and only cause a rudimentary disease—abort, so to say, and the fever is of a benign form. Or else the morbid germs vary in nature, and do not have the same degree of virulence, thus determining diseases whose gravity also presents multiple differences.

Possibly Dr. Smith is wise in withholding immediate faith in specific germs as the cause of puerperal fever, awaiting further study of germs and conclusive proof of their power, and for the present regarding them as the accidents, not the essentials; nevertheless the tendency of those who have given most study to the disease is to believe in its germ origin. That which seems to us a strong argument in favor of the theory mentioned is that our best antiseptics are our most powerful germicides. Nevertheless, the question is still unsettled, and the greatest liberty of opinion must therefore be admitted.

THE TREATMENT OF PROSTATIC OBSTRUCTION.

IN a paper read at the International Medical Congress at Copenhagen, MR. REGINALD HARRISON, of Liverpool, considered the treatment of difficult micturition due to an enlarged prostate, and described a new operation for its relief, which must be regarded as a most valuable addition to the surgery of this intractable affection.

The class of cases to which he referred are those not adequately relieved by the use of the catheter, and include those in which there is difficulty in pass-

ing that instrument, those in which hemorrhage almost always attends its use, those in which emptying the bladder is not followed by a sense of relief, and the very common examples of catarrh, in which the bladder is little else than a chronic abscess. The various expedients that have heretofore been resorted to for the relief of such conditions, as puncture above the pubes, by the rectum, and from the perineum, with the retention of a canula for the discharge of the urine, do not deal directly with the cause of the obstruction, and in two of these measures the artificial canals are inconveniently placed, as the opening for the escape of the urine should be dependent.

With the view of overcoming these objections, Mr. Harrison opens the membranous urethra in the middle line, and divides the obstructing median portion of the prostate, partly with a straight probe-pointed knife, and partly by divulsion with the finger or a large sized bougie, until the access to the bladder is felt to be free. A double drainage-tube is then inserted, and retained for from six to twelve weeks, through which the section of the median lobe, or bar-like ridge, is made permanent, the indication for the removal of the tube being the easy introduction of a catheter along the natural route, and the passage of the urine along its side. A bougie is inserted regularly until the external wound has closed, and its occasional use is continued as a precautionary measure.

In the case which Mr. Harrison relates as an illustration of the happy result of his procedure, the patient was out of his bed in ten days, and the drainage apparatus was used for eight weeks. There was no further trouble in micturating or in passing the largest-sized catheter; the bladder regained its natural power of expulsion; there was no residual urine, and he could retain the fluid for four hours. Six months after the operation the patient had a paralytic seizure, from which he has not recovered, but it has not been found necessary to resort to catheterism.

DR. WILLIAM OSLER.

Last Tuesday Dr. William Osler, of Montreal, was unanimously elected to the Chair of Clinical Medicine in the University of Pennsylvania, rendered vacant by the transfer of Dr. Pepper to the Chair of Theory and Practice of Medicine.

Dr. Osler was born in 1849, and was educated at Trinity College School and at Trinity College, Toronto. He received his medical education at McGill College, Montreal, and at the Toronto School of Medicine, and the degree of Doctor of Medicine was conferred on him in 1872. He subsequently pursued his studies for two years and a half at University College, London, and at Berlin, and Vienna. In October, 1874, he was elected to the Chair of the Institutes of Medicine in McGill College. In the following year he was appointed Pathologist to the Montreal General Hospital, and in 1878, Physician and Lecturer on Clinical Medicine in the Summer Session. He was elected a Fellow of the Royal College of Physicians of London, in 1883, and has been appointed to deliver the next Gulstonian Course of Lectures before that body. His contributions to medical literature are numerous and valuable; they cover the broad field of medicine and bear evidence of being the fruits of a cultivated and scholarly mind. At the annual meeting of the Canada Medical Association, held last month, in view of his anticipated removal to Philadelphia, and actuated by a strong desire on the part of its members to testify their high regard for his ability and character, he was elected President for the ensuing year.

From this brief sketch it will be perceived that Dr. Osler comes to Philadelphia in the early maturity of his intellectual powers, with a mind well trained for the duties he is called upon to perform, and in the enjoyment, both in his own home and abroad, of a deservedly high personal and professional reputation, which has been acquired at an unusually early period in his career.

The University of Pennsylvania and the medical profession of the States are to be congratulated on this election, and while Dr. Osler leaves Montreal amid the united and expressed regrets of the faculty and students of McGill College, of the medical profession and of the medical press of Canada, a most cordial welcome awaits him at Philadelphia, in his new and extended field of labor.

A CHANGED MAXIM.

Doctors occasionally quote the following words: *Anceps remedium melior est quam nullum*, that is, a doubtful remedy is better than none. Many would dispute the wisdom of this supposed maxim. Certainly Sydenham gave it no countenance, for he tells us, "I have been long of the opinion that I act the part of an honest man and a good physician as often as I refrain entirely from medicines, when, upon visiting the patient, I find him no worse to-day than he was yesterday; whereas, if I attempt to cure the patient by a method of which I am uncertain, he will be endangered both by the experiment I am going to make on him and by the disease itself; nor will he so easily escape two dangers as one."

However, we do not intend to discuss the truth of the supposed maxim, but to call attention to the fact that it is not only an abridgment, but also a change of a once famous maxim of Celsus. This illustrious writer used these words: *In evidenti mortis periculo satius est anceps remedium experiri, quam nullum*. He, therefore, did not teach that in all cases a doubtful remedy was better than none, but only that it would be better in manifest danger of death to try such a remedy. When the maxim is correctly quoted, few or none would doubt its truthfulness.

SPECIAL ARTICLE.

INTERNATIONAL ELECTRICAL EXHIBITION, PHILADELPHIA.

[CONCLUDING NOTICE.]

THE White Dental Manufacturing Company, of this city, offer some exhibits which are of interest both to dentists and physicians. The dental instruments are the plugger and the burring engine. The former can make as many as 3500 strokes per minute. It is constructed on the simple principle of an electro-magnet and interrupter, the blow being delivered on one end of a steel rod, the other end of which constitutes the plugging instrument, which is inserted into the cavity of the tooth. The force of the stroke can be graduated by varying the distance of the interrupter from the steel rod. Very many of these instruments are in use, and, in skilful hands, better work is said to be obtained than by the manual method.

The burring engine is a small electro-motor, fastened in the handle, which revolves very rapidly and communicates its rotary motion to the burring instrument. These machines are run by a four-cell Bunsen battery. They are interesting as showing what has already been achieved in the application of electricity to small surgical instruments, where rapid action is desired.

The same Company make some good exhibits of illuminators, in the form of small incandescent lamps, requiring from three to five volts-power to run them. It is quite remarkable with what brilliancy one of these small lamps will light up the structure of a tooth. The sound tooth is quite translucent before one of them, while any small spot of caries can be detected as an opaque mass. We were also shown handles adapted to hold these lamps in laryngological and gynecological work. An objection to them for prolonged use seems to be that the globes of glass are apt to become overheated. It is said that the light from these small electric lamps is too brilliant to be used for illuminating the chambers of the eye. Such is the objection, at least, which we understand one well-known ophthalmologist has urged against them. If a patient hold one of these lamps in the closed mouth, in a dark room, the light is transmitted very clearly into the nares, partially through the antrum of Highmore. We are not informed whether this method has been used in diagnosis, and can only conjecture as to its probable value. Mr. Starr, who is with the White Company, has some very small storage-cells, quite portable, of several volts-power, which he says will run almost one hour.

A new battery-cell is displayed by Partz, which promises to be of much value to physicians, if all its claims are substantiated. It is now being tested by a committee of the examiners. It has zinc and carbon elements in a solution of ammonium bichromate and zinc chloride. It is claimed to have high electro-motive force, to be very constant, and to have no local action. It is certainly very portable, as each cell is tightly corked, and is so made that the exhausted fluid can be readily removed and fresh fluid substituted. As the battery is at present constructed, however, the keyboard has neither pole-changer nor interrupter, and is otherwise deficient.

The Kidder Company, of New York, have a large display of their batteries, which present some features which are apparently special. Their tip-cup is probably familiar to most physicians. It is so constructed that upon being thrown over the fluid runs into a reservoir away from the elements. They have applied the same principle to a series of small cells in a portable galvanic battery. Many of their faradic instruments have no slow interrupter, which we consider a defect. They display many good electrodes adapted to different regions of the human anatomy.

This Company's claim of supplying *ten* different currents from one faradic battery brings up a subject which we think may be misleading to many. Electrical science recognizes a primary and secondary induced current, and the therapeutic distinction between even these two is not usually regarded as important. A variety in so-called tension may no doubt be attained by varying the length and thickness of the wire in different coils. In the Kidder machine there are four coils which, as well as we can unravel the diagram, are united at the ends, making them practically one coil. The primary coil is also united to the secondary. By a series of five binding-posts it is said that the different currents from these coils are put in various combinations. The exact fact seems to us to be this: when the primary and first secondary are being used in so-called combination we are really having a longer primary coil, and, of course, obtaining a simple primary induced current; and when two or more secondary coils are being used we are having only a secondary induced current through a longer wire. It is just equivalent, in other words, to tapping a coil at different points, except that we are using wires of different thickness. That there may be some distinctions of therapeutic value in such a plan we would not absolutely deny, but we think they are not sufficient to warrant a claim of ten distinct currents. The general make-up of the instruments of the Kidder Company is attractive and substantial.

Among the exhibits of Flemming, not noted in our preceding notice, is the "non-polarizable" electrode, after DuBois-Raymond. This consists of an amalgamated zinc rod in a glass tube containing a solution of zinc sulphate. This should be of great use, especially where accurate measurements are desired, and where the polarization of the electrode would introduce a factor of error. The same manufacturer has also a dental helix for the relief of pain during the extraction of teeth; and he displays a pedal commutator and rheotome. This latter mechanism is in the form of a pedal, by depressing and elevating which, with the foot, the polarity can be changed and the current broken at will.

There are also some combination batteries by French—an ordinary induction apparatus with coils of different metals which can be thrown into circuit at will. We have no sufficient guarantee, however, that coils of different metals give appreciable differences in therapeutic results.

In this series of notices of the International Electrical Exhibition we have confined our descriptions to apparatus of special interest to the medical profession, not attempting to present any description of the great array of apparatus in which electricity is not only the moving, but the lighting and the speaking spirit.

SOCIETY PROCEEDINGS.

AMERICAN GYNECOLOGICAL SOCIETY.

Ninth Annual Meeting, held at Chicago, September 30, and October 1 and 2, 1884.

(Specially reported for THE MEDICAL NEWS.)

TUESDAY, SEPTEMBER 30TH—FIRST DAY.

THE meeting was called to order at 10 o'clock A. M., in the Club-room of the Palmer House, by THE PRESIDENT, ALBERT H. SMITH, M.D., of Philadelphia.

After roll-call, to which twenty-four of the fifty-four Fellows responded, the President introduced DR. W. H. BYFORD, of Chicago, who delivered the following

ADDRESS OF WELCOME:

Mr. President and Fellows of the American Gynecological Society: In accordance with the requests of the Committee of Arrangements, I greet you as guests of the Chicago Gynecological Society and the general profession of this city. Many of the distinguished members of your Society visit Chicago for the first time; others have honored us with their presence many times in the past. The former, however, are not strangers to us, because their good works in the profession have sent their fame before them. The latter are familliar to us in person as well as renown. Your meeting here has been anticipated as an occasion of great pleasure as well as profit, and we desire to welcome you in such a manner as may make you feel entirely at home. We assure you that anything we can do to make your stay enjoyable, will also give us pleasure, and I doubt not that every citizen of Chicago whom you may meet will manifest the same desire.

Since the organization of this Society, some of its most illustrious members have gone to reap the rewards of their benevolent, faithful, and excellent labors. In the short time which has elapsed since we last met, our leader has fallen. He whose brilliant achievements crowned him with a halo of glory such as seldom adorns the brow of mortal man, has been called to his immortal heritage. The name of J. Marion Sims will ever remain embalmed in the history of the profession he loved and served so well. His example has to many of us been, as it will be to those who come after us, a stimulus to great efforts in behalf of suffering womankind. In the light of faith he is not lost to us, but stands on the beautiful shore beckoning us to immortal deeds. We cannot again feel the warm grasp of his hand, but we may follow in his footsteps.

In the presence of so large a number of the Fellows of the Society at this meeting, we see the promise of much good scientific work and delightful social enjoyment. Again allow me to welcome you individually to the hospitalities of Chicago. To each of you we tender the freedom of the city.

DR. JOHN C. REEVE, of Dayton, Ohio, then read a paper entitled

MOOT POINTS IN REGARD TO INVERSION OF THE UTERUS.

The points or queries of the paper were: 1. Does inversion of the uterus ever occur independently of pregnancy, or a polypus, or even in the virgin organ? 2. Does inversion ever begin at the cervix and proceed from below upwards, instead of by indentation of the fundus? 3. May not puerperal inversion occur at some considerable period after delivery? 4. May not inversion occur without any marked symptoms whatever to indicate the accident?

The points or queries were supported by arguments and by reports of cases collected from medical literature. The author of the paper claimed that the last two were certainly proved, and were of great practical importance. In conclusion, the author spoke of the extreme difficulty in the differential diagnosis of inverted uterus and sessile polypus.

DR. SCOTT, of San Francisco, had seen two cases of inversion of the uterus. The first case of inversion was of little interest, as the organ was immediately returned to its original position. The second case was of interest, and occurred last year. A lady of Sacramento was attended in her last confinement by a homœopath. The labor was normal; the placenta was not retained, but the cord was dragged upon, with consequent profuse hemorrhage; the hemorrhage ceased, but recurred several times during next three weeks, when the attending physician made the diagnosis of inversion of the uterus. After ineffectual efforts at reduction, he gave up the case, telling the patient it would come around all right. A regular physician saw the woman, recognized the condition, but could not reduce the tumor. For a period of seven months following the accident—during which time the patient suckled her babe—the uterus remained completely inverted without hemorrhage. The woman complained of backache, bearing-down sensations, and profuse leucorrhœa. At the end of the seventh month, the babe was weaned, when profuse hemorrhage occurred. Dr. Scott assumed charge of the case, and in twenty minutes' time effected reduction. The uterus was not large and very soft. In the act of reduction, Dr. Scott felt the cervical circular fibres tear, so that he could insert his half hand into the uterine cavity. Hot water injections were prescribed, and the patient felt quite comfortable until her next menstrual period occurred, when hemorrhage again called him to see her. The hemorrhage persisted for ten days, in spite of all efforts to check the flow. At the next menstrual period, hemorrhage again occurred. Two silver sutures were inserted to correct the laceration of the circular fibres. This little operation was followed by a severe attack of cellulitis, but no hemorrhage occurred subsequently, and the patient recovered.

DR. W. H. BYFORD, of Chicago, had seen nine cases of uterine inversion, of which two were acute. One case, occurring in his own practice in the spring of 1870, and which he had published, was of especial interest as corroborating Dr. Reeve's third proposition. He had attended a Jewess, during her second confinement, and had convinced himself that everything in connection with the parturition had been of a normal character. Vaginal examination, immediately after labor, however, had not been made. He left Chicago for California, and was absent for a considerable period of time. On his return to the city, he was informed that two weeks before a German physician had been called to see his patient on account of profuse uterine hemorrhage, had made the diagnosis of inversion of the uterus, and had effected its reduction. He was of the opinion that the

inversion had occurred at a period subsequent to his last visit, and that the hemorrhage was caused by a sort of revulsion, consequent upon the weaning of the babe. He remembered distinctly the case of Fisher *vs.* Stone, occurring in Chicago, twenty years ago, to which Dr. Reeve made allusion in support of his third proposition. Dr. Fisher had attended Mrs. Stone in her confinement, and had discontinued his visits, when it was discovered that her uterus was inverted. Her husband, an extremely irascible man, paid the physician's bill, but applied to him such damaging epithets that the doctor instituted suit. The physician lost the suit, and was ruined by the costs of the prosecution. There was no doubt in the minds of impartial medical men that the inversion occurred after the discontinuance of Dr. Fisher's visits, and that he was nowise responsible for the condition.

DR. BROWNE, of Baltimore, had seen a case of inversion of the uterus, occurring in the practice of a thoroughly competent physician, to which attention had been directed by the occurrence of hemorrhage on the ninth day. The cervix was lacerated, and it was highly probable that inversion had commenced in the manner indicated by Dr. Reeve's first proposition.

DR. DUNLAP, of Springfield, O., had seen two cases which threw some light upon the mode of occurrence of the accident. The first case was of one year's duration when it came under Dr. Dunlap's observation. The patient was attended in a normal confinement by a competent physician. Subsequently, recurrent hemorrhages were noted, and digital examination—some months after labor—revealed a tumor dilating the os. The tumor increased in size until it appeared through the os, and careful examination revealed complete inversion of the uterus. This case shows that inversion may commence by dimpling of the fundus. The second case was of less interest but confirmed the first observation.

DR. SAWYER, of Chicago, referred to two points in the etiology of uterine inversion, deduced from the observation of one fatal case occurring in his own practice. A woman with a large-sized abdomen, suggestive of multiple pregnancy, but which proved to be dropsy of the amnion, gave birth to a child, after nearly inundating the room with amniotic liquor. The placenta was expelled, and the uterus, though somewhat flabby, preserved its symmetry, extending up to the umbilicus. Substituting for his own hand, placed upon the fundus, that of the husband, Dr. Sawyer turned to look after the babe, when a sudden gush of blood called his attention to the woman. One fluid-drachm of the fluid extract of ergot was immediately exhibited by the mouth, and the doctor's hand sought the fundus through the abdominal walls. During the space of time—scarcely one minute—during which his attention had been directed to the babe, the fundus had dimpled, descended, and appeared through the os, in which position it was held by the tonic contractions of the uterus, doubtless induced by the ergot. All efforts at reduction were of no avail, and the patient collapsed and died three hours later, just as Dr. W. H. Byford, summoned in consultation, entered the room. The autopsy disclosed the area of placental attachment around the right horn of the uterus, to be four times the thickness of the uterine wall in other regions. The fundus had dimpled in all probability as the result of the operation of the force of gravity.

DR. H. P. C. WILSON, of Baltimore, fully agreed with all the gentlemen who had spoken as regarded Dr. Reeve's third proposition. One case of uterine inversion, discovered six months after its occurrence, was reduced by the doctor. Any influence interfering with involution acts as a predisposing cause.

DR. HOWARD, of Baltimore, said cases of uterine inversion were excessively rare—according to Dr. Reeve's statement, occurring but once in 140,000 to 150,000 cases of labor. He had seen four cases. The first case occurred in the practice of a midwife, and was due to pulling on the cord. Dr. Howard saw the case three days later, when the pulse of the woman was at 150, and her temperature was 103°. Reduction was effected, and recovery ensued. His second case, a mulatto woman, almost in collapse, he saw in consultation with Prof. Christopher Johnston. The inversion was due to a fibroid tumor with two pedicles. The fibroid was removed, but the patient died. In the third case, the woman was bleeding, supposably from prolapsus. The fourth case was due to a large polypus. The polypus was removed and the organ returned to the pelvic cavity. The woman, although sixty years old, made an excellent recovery. He had seen Dr. Emmet deliver a fibroid by forceps and restore the inverted uterus. In 1876, he was at the International Medical Congress, at Philadelphia, and heard Dr. Washington L. Atlee report a case, in which he had amputated an inverted uterus, mistaking it for a polypus.

DR. REEVE closed the discussion, adding nothing to the facts already developed.

DR. HENRY P. C. WILSON, of Baltimore, then read a paper entitled

FOREIGN BODIES IN THE ABDOMEN AFTER LAPAROTOMY.

He spoke of the importance of the subject, claiming that foreign bodies in the abdomen after laparotomy were of more frequent occurrence, and produced more mischief, than was generally believed. Such accidents were not reported for the reasons, (1) they reflected upon the skill of the operator; and (2) it was not always possible to obtain a *post-mortem* examination. After a laborious search he had been able to collect but 21 cases. Of these 21 cases only 6 had been published. More than two-thirds of these cases never came to light. Six of these cases occurred in America, 15 in Europe. One case, his own, had been published in America; 5 had been published in Europe. Of these 6 published cases, the foreign bodies in 4 were sponges, forceps in the remaining 2. Four patients recovered, two died. The five published European cases occurred in the practices of Lawson Tait, Sir Spencer Wells, Carl Braun, and Gustav Braun. In Lawson Tait's case an excited bystander had torn one of the twelve sponges, habitually employed, into two pieces. The torn sponge was found in the abdominal cavity four days later. In the first case, reported by Sir Spencer Wells, the sponges were counted by a nurse, and sixteen were asserted to be present. Next morning two sutures were removed, and the sixteenth sponge was found in the abdominal cavity. In the second case, reported by Sir Spencer Wells, the foreign body was a pair of forceps, which

were found next day wrapped up in the omentum. Carl Braun reports a case in which the foreign body was a sponge, while his brother, Gustav Braun, reports the presence of a pair of bull-dog forceps.

Dr. Wilson's case was very briefly as follows: The patient, twenty-nine years old, married seven years, three children, youngest twenty months. In the fifth month of pregnancy came to St. Vincent's Hospital, February 16, 1883, to be operated upon for ovarian tumor. There was notable absence of the *facies ovariana*. February 20, 1883, laparotomy was performed, and a dermoid cyst of the right ovary, together with the ovary which had undergone fatty metamorphosis, was removed. The tumor weighed twenty pounds. The patient complained of considerable abdominal pain, and miscarried on the eighteenth day after the operation. Thirty-one days after the operation an abscess—thought at the time to be the cause of the miscarriage—opened through the lower angle of the abdominal wound. On the 16th April, 1883, the patient left the hospital, and came under the observation of Dr. George H. Hocking, an able and accomplished physician, living in Western Maryland. When first seen by Dr. Hocking, the patient was thin, anæmic, with a circumscribed abdominal tumor, very painful to the touch. On 14th May, a quantity of fetid pus was discharged through the abdominal incision; bits of sponge were now discharged, from time to time, through the orifice, until, on the 7th of August, the discharge ceased, and the patient began to improve rapidly. By December she had fully recovered and was working about her house. Dr. Wilson, in conclusion, formulated his rules for the prevention of such accidents, as follows:

1. Count and record all sponges and instruments.
2. Use as few instruments and sponges as possible.
3. Let the operator sponge himself.
4. Let the assistant's functions be confined to handing instruments and sponges.
5. Let the sponge be perfect in texture and strong; never allow the division of a sponge, and use as few small sponges as possible.
6. Let compression and torsion forceps be large.
7. Employ only two assistants in addition to the etherizer.
8. Let the operator himself verify the record before closing the abdominal incision.

DR. T. GAILLARD THOMAS, of New York, complimented the author upon his bravery in the exposure of an error in his own operative *technique*. He had performed laparotomy between 300 and 400 times and had had one similar experience. Two or three years ago, in the Woman's Hospital, he had a case of cancer of the spleen, complicated by Bright's disease. Yielding finally to the clamors of the patient for an exploratory incision, Dr. Thomas, assisted by Dr. James B. Hunter, of the Women's Hospital, made an abdominal incision, explored the abdominal cavity, found the tumor could not be extirpated, and reunited the wound. Ether was used as an anæsthetic. It may be remarked parenthetically, that Dr. Thomas has given ether, and substituted chloroform in all cases in which there is any renal disease. Ether, as has been well pointed out by Dr. Emmet, has a peculiarly irritant action upon renal structures, in a pathological state. In chronic Bright's disease, ether frequently induces uræmia by suppression of the urinary secretion. But the ordinary cup-sponge was employed. The patient became comatose and died.

The autopsy revealed a small piece of sponge within the abdominal cavity. It was difficult to account for its presence, as Dr. Hunter was an exceedingly careful and able assistant and but one sponge was employed. It was probably due to the friability of the sponge.

Dr. Thomas always counted and recorded all sponges and instruments employed; he could not sponge himself as both hands were required to differentiate between tissues and organs. He employed as assistants, one etherizer, one assistant to sponge, one to hand instruments, and one nurse. He uses as few instruments and sponges as possible. He attaches now to each of his sponges a tape, six inches in length, usually of a bright color. These tapes hang outside of the abdominal wound. He leaves as few instruments, as possible, upon bleeding vessels; removing them as rapidly as possible, and securing the bleeding point by a torsion or a ligature. He has a dread of Péan's and similar artery forceps remaining for any length of time on bleeding vessels within the abdominal cavity.

DR. JACKSON, of Chicago, had seen three cases in which foreign bodies had been left within the abdominal cavity after laparotomy; forceps in one, sponges in two cases. He agreed in a general way with Dr. Wilson's rules.

DR. REEVE, of Dayton, O., thought that very good evidence of the aseptic character of Dr. Wilson's sponges had been adduced.

DR. DUNLAP, of Springfield, O., had never met with the accident—at least he had no knowledge of such an event. He used very few instruments, and always picked them up himself. He also uses the sponges himself. He is the only man who puts his hand within the abdominal cavity. Large blanket sponges are used to support the intestines; the patient is placed in a semi-recumbent position, so that the fluids can drain into the cul-de-sac of Douglas. He makes a free abdominal incision, as he wants sufficient light to be enabled to leave the abdominal cavity in a perfectly dry state. His abdominal incisions, no matter what their length may be, always unite within three days by first intention. This is as certain as the purgative action of castor oil. He condemned strongly the use of sponges on sticks or holders.

DR. HOWARD, of Baltimore, said that at the Samaritan Hospital, two nurses always count the sponges before and after the operation, and that their number is fixed constantly at fifteen. An eminent English surgeon related a case to him, in which the surgeon became convinced a sponge was in the abdomen; the incision was reopened and the sponge found and removed; the patient recovered. Another surgeon of equal eminence thought he had left a sponge in the abdominal cavity; he reopened the incision and found nothing; the patient died. Dr. Howard was of the opinion that chloroform had an irritant effect on the kidneys, as well as ether, though to a less degree. He was once about to operate in a case of vesico-vaginal fistula, anæsthetized by means of Junker's apparatus (the method employed at the Samaritan Hospital), when the heart ceased to beat. Less than half a fluid-drachm of chloroform was used. The autopsy revealed death from cardiac paralysis and Bright's disease.

DR. ENGELMANN, of St. Louis, had once performed laparotomy in the presence of a distinguished Eastern gynecologist and certain members of the local profession. The Eastern gynecologist became excited and gradually usurped the place of Dr. Engelmann's assistant. Sponges were crowded into the abdominal cavity without due care. Dr. Engelmann was assured that no sponges were in the abdominal cavity, and the abdominal incision was closed. The patient died, and the autopsy disclosed the peritoneum slightly injected; the sponge was perfectly fresh and clean.

DR. MUNDÉ, of New York, suggested: 1. Never use friable sponges, or such as have deteriorated by use, or the employment of disinfectants. 2. Never cut sponges. 3. Always use sponge-holders.

DR. BAKER, of Boston, said he would like to hear of the effect of other foreign bodies, such as the rubber, silk, and catgut ligatures in the abdominal cavity.

DR. WILSON closed the discussion by saying he thought the suggestion of Dr. Thomas, with reference to the sponges, an excellent one, and he would adopt it. He agreed with Dr. Dunlap so far as free incision was concerned. Dr. Mundé's point was excellent. Seven cases of foreign bodies left in the abdominal cavity after laparotomy—six given him by the Fellows, and one he had heard of since his arrival in Chicago—swelled the list to twenty-eight cases.

DR. HOWARD moved that the papers of absentees should be read by title, unless there was time at the close of the meeting to read them *in extenso*. Adopted.

AFTERNOON SESSION.

DR. C. D. PALMER, of Cincinnati, read a paper entitled

ABDOMINAL SECTION: ITS VALUE AND RANGE OF APPLICATION.

After an elaborate discussion of the methods of differential diagnosis in cases of abdominal tumors, the author spoke of tapping. While he was unwilling to give up tapping entirely, he was unwilling to employ the method as universally as its advocates demanded. He wished to strike the golden mean. Simpson said tapping caused the death of one woman in six. Peaslee claimed that in polycysts, it was fatal in fifty per cent. of all cases. Sir Spencer Wells asserted that it increased the mortality of laparotomy two per cent. Still, he thought the position of Schilling, Storer, and Lawson Tait too radical. In conclusion, tapping was (1) frequently unnecessary; (2) it was dangerous except in cases of simple cyst; (3) the physical, chemical, and microscopical evidence that could be derived from tapping, was only of a probable character.

Exploratory incision was the only means of positive information. After alluding to the statistics of this operation as given by F. Bird, W. L. Atlee, Kœberlé, Sir Spencer Wells, C. C. Lee, and Lawson Tait, he said he had made the exploratory incision in five cases of malignant disease; four cases terminated fatally in from three to thirty days; one case survived sixteen months. In cases indicating the operation, the risk was relatively slight. Its statistics were much better than those of the incomplete operation.

Preparations should always be made for the complete operation before the exploratory incision is made.

Dr. Palmer, in conclusion, stated the forms of disease in which the principles evolved in the paper would indicate the exploratory incision as follows:

1. Certain ovarian tumors; seldom necessary in uncomplicated cases.

2. Certain interstitial and extrauterine fibroids, where oöphorectomy or hysterectomy was in view.

3. Certain cases of acute and chronic peritonitis. Whenever there was danger of septicæmia, there might be considerations which would justify abdominal section and drainage of the peritoneal cavity, or circumscribed purulent collections.

4. Intestinal obstructions.

5. Some cases of chronic pelvic abscess.

6. Extrauterine pregnancy, after the fourth month.

DR. ENGELMANN was of the opinion that the exploratory incision was a method of diagnosis with which the American surgeon was comparatively unfamiliar. This ought not to be the case. It was decidedly less dangerous than tapping. He had made the exploratory incision in three cases of uterine cancer.

DR. DUNLAP had no experience with the exploratory incision, and never practised it. When he could not make a positive diagnosis by other means, his patient was so far gone that she could not be operated upon at all. The temptation, after the abdominal incision, to carry the operation through, is too great for the average surgeon to resist. Hence, it is a dangerous procedure.

DR. MUNDÉ, while admitting the force of Dr. Dunlap's last remark, was of the belief that the exploratory incision was not made frequently enough in America. The mortality from tapping was twenty-five per cent.; that of the exploratory incision was very much less. He had made the exploratory incision once in a case of uterine myoma, complicated by ventral hernia; tapping would have proved fatal. In chronic pelvic abscess, the exploratory incision was especially indicated.

DR. WILSON thought every laparotomy was of the nature of an exploratory incision. No man can know definitely the nature of an abdominal tumor prior to the incision. In a case of amniotic dropsy, causing extreme dyspnœa, he was afraid to tap, and made the exploratory incision. The diagnosis lay between dropsy of the amnion and pregnancy, complicated by cystic degeneration of the ovary. Premature labor was at once induced, and six gallons of liquor amnii withdrawn. Tapping would undoubtedly have involved penetration of the uterus, and probably a fatal result. As the case terminated, the patient made an excellent recovery. He was an advocate of the exploratory incision, and opposed to tapping.

DR. MAURY, of Memphis, saw two cases, one of multilocular cyst of the ovary, the other of uterine myoma, in which the exploratory incision was made, and both patients recovered from the operation.

DR. JACKSON asked for the views of the Fellows, as regards the treatment of chronic pelvic abscess by abdominal section.

DR. DUNLAP, in reply, said that a case in point had recently come under his observation. A physician, supposed to be suffering from malignant disease, impacted colon or rectum, while riding on the cars, became so sick that he consulted Dr. Dunlap. The doctor made the diagnosis of psoas abscess and proceeded to operate. An incision, extending from the left to the right of the

median line, was made, and one-half gallon or more of pus was removed. The abscess had, so to speak, "kinked" the colon.

Dr. Scott narrated the history of two cases, the one, of chronic abscess in the left broad ligament, the other, of an enormous pyosalpinx of the right tube, cured by abdominal section and subsequent drainage.

Dr. Palmer closed the discussion, and said that abdominal section was especially fatal in cases of malignant disease of the uterus and adnexa. In confirmation of this statement, he quoted his own five exploratory incions, with four deaths in from three to thirty days, with one recovery.

Dr. Engelmann differed from Dr. Palmer in regard to the mortality of abdominal section in malignant disease. In all the cases in which he had performed the exploratory incision no perceptible difference, as regards primary union or effect of the operation, could be attributed to the indication for the operation. The wound healed and the patient recovered as well in cases of malignant disease as in the most benign myoma.

The Secretary, Dr. Frank P. Foster, of New York, then read, by title, the following papers: *The Hygiene of Pregnancy*, by Dr. Samuel C. Busey, of Washington, and *Rapid Dilatation of the Cervical Canal*, by Dr. William Goodell, of Philadelphia.

Dr. Paul F. Mundé, of New York, then read a paper entitled

CERVICAL FIBROIDS AS A CAUSE OF DYSTOCIA, AND THEIR REMOVAL BY VAGINAL ENUCLEATION.

The favorite site of fibroids was the *corpus uteri;* of 205 cases collected by Lee and Corti 25 were cervical. Cervical fibroids are situated in the anterior or posterior lip, and are usually small. They may, however, attain alarming proportions. As a factor in dystocia they are of importance. They may constitute indications for version, craniotomy, or the Cæsarean section. In some cases they occasion the loss of so much blood that puerperal infection and inflammations may ensue. Dr. Mundé confined himself to the discussion of *sessile fibroids*. In cases of fibroids of extensive size occurring in the cervix, three plans of treatment could be considered, viz.:

1. Mutilation of fœtus.
2. Removal of the fibroid.
3. Cæsarean section.

Cæsarean section, however, was a *dernier ressort*. Carl Somer, assistant in Schröder's clinic, in Berlin, has recently published the results of 112 enucleations of cervical fibroids: only 18 patients, or 16 per cent., died. Of 30 cases of Cæsarean section, from the same indication, 24 mothers and 16 children died.

Dr. Mundé then proceeded to give the history and exhibit the tumor of the following case: F. F., thirty-eight years old, married; last child one year ago; began to bleed at an early period in pregnancy. A physician who saw the case made the diagnosis, "*elephantiasis ossis uteri*." The patient became emaciated, weak, and could not sit up. Finally she was brought to Dr. Mundé. Vaginal examination revealed the presence of a large interstitial fibroid occupying the anterior lip of the cervix, and rendering access to the cervical canal and posterior lip extremely difficult; ballottement was elicited, and the positive signs of pregnancy were observed. Two plans of treatment were considered:

1. To control hemorrhage until term, then attempt enucleation, Porro's operation, or Breisky's subperitoneal enucleation.

2. Immediately proceed to enucleate. It was finally decided to allow the woman to recuperate, for the space of one week, and then attempt enucleation.

On May 16, 1883, the day appointed for the operation, the woman fell into labor, the bag of waters ruptured, the cord and one hand prolapsed. At three o'clock P.M., the tumor was enucleated by traction with volsellum forceps, digging out with the fingers, and sawing with Thomas's serrated spoon. The operation lasted about three-quarters of an hour, and was comparatively bloodless. The fœtus and placenta were delivered, and the cavity in the anterior lip washed out with bichloride solution, and packed with iodoform gauze. On the second day the temperature rose to 102° F.; third day, 103° F. The gauze was removed, and a drainage-tube was inserted; the temperature became normal, and the cavity of the fibroid filled up rapidly. The diameters of the tumor, as regards length, breadth, and thickness, were respectively twenty and one-half, eight, and six inches. The tumor weighed three pounds.

Playfair, in 1877, made the assertion that only small fibroids occurred in the cervix; Braxton Hicks promptly challenged this assertion.

Comparing the statistics of enucleation and of Cæsarean section, the result is vastly in favor of enucleation. Carl Somer has collected eight cases of enucleation, resulting in the survival of eight mothers and five children; thirty cases of Cæsarean section—Porro's operation—have resulted in the deaths of twenty-four mothers and sixteen children.

The case just narrated bears a great degree of resemblance to the case of Schröder. Schröder waited until the woman fell into labor, in order to profit by the increased vascularization of the parts. Dr. Mundé did not mean to defer the operation so long. The premature labor was purely accidental.

In the evening,

A BANQUET

was tendered the Fellows by the members of the Chicago Gynecological Society. Dr. A. Reeves Jackson, President of the Chicago Gynecological Society, acted as toast-master. The prominent members of the local profession were present. The banquet was a happy occasion, owing to the apt selection of toasts and speakers. Letters regreting their absence were read from Mr. Lawson Tait, Dr. Playfair, Sir Spencer Wells, Mr. Braxton Hicks, Dr. J. C. Dalton, Mr. J. Matthews Duncan, Mr. Thomas Keith, Dr. Emmet, Dr. W. T. Lusk, and Dr. John L. Atlee.

Wednesday, October 1st—Second Day.

Morning Session.

The President, Albert H. Smith, M.D., of Philadelphia delivered his Address, which was entitled

THE PRESENT ASPECT OF THE PUERPERAL DISEASES.

Although a single year, he said, does not produce a great amount of work in any particular field, the accumulated work of several years will gradually accomplish

much that is valuable. He called attention to the fact that the field of obstetric work had greatly increased during the past few years. It is a well-recognized fact, he said, that there is no principle in general surgery which is not involved in the work of the gynecologist, and no work, except some of the more delicate operations upon the organs of sense, which his work would not qualify him for. Yet the everyday operations which come into his hands are those of which the general surgeon has but little knowledge, and in which he has shown the most meagre expertness and success. There were many kinds of surgical work several years ago which were the wonder or the horror of the profession in the hands of the general surgeon, but which now belong to the commonplace department of a woman's clinic. Plastic operations are now the daily work of gynecologists, and the wonder is, not that the operation for the reconstruction of a torn cervix, or the closure of a fistulous opening, the restoration of a pelvic floor, or the removal of redundant tissue, should succeed, but that with the improved methods of handling, and the substitution of neat instruments for the old bungling armamentarium of the general surgeon, that such work should ever fail. In the matter of abdominal surgery, gynecologists have gradually come to have charge of almost all of it. Beginning with operations on the pelvis, they have extended their field upwards until it now embraces the treatment by operation of all abdominal diseases of both sexes; including the operations of nephrectomy and nephrotomy, those for carcinomatous disease, for intestinal obstruction and invaginations, for the removal of hydatid tumors of the liver, of calculous affections of the gall-bladder, and various other operations. He called special attention to the moral position which obstetricians and gynecologists should take in the community. We should recognize, he said, in a practical manner the high ground upon which they should stand in relation to the world around them; the special work of each one brings him into contact with woman almost exclusively in her sexual capacity and relations, around which society of every degree of refinement and civilization, in all ages, has thrown its protection; and he is admitted to such sacred ground only because of an unqualified confidence in his manliness, his honor, and his earnest sympathy with those who are compelled to place themselves under his care. If he appreciates the position, he will feel that there is nothing in his function which can encourage or even tolerate a disregard of the finer feelings of delicacy in woman, nor a contempt for that natural modesty which is among her highest ornaments; and still further he will feel that at all times, in her absence as in her presence, should her honor and purity be saved from outrage, whether of word or action. He has thought lately that some hints on this subject might be needed, and that the personal influence of the Fellows might be enlisted on this point, especially as regards the prurient tendency of many of the articles in our medical journals.

The speaker then said that he had chosen for his subject one which had been the subject of a most learned discussion before the New York Academy of Medicine during the past winter, *Puerperal Fever;* he said that probably there had never been a discussion in this country, on a scientific subject, which had attracted so much attention. The subject is one of very great importance, and it is of great consequence that some theory shall be established, upon which intelligent and conscientious youn practitioners may act in averting the evils of the fearful scourge; for he cannot act successfully and upon an intelligent basis unless he has a clear idea of the pathology, and especially of the etiology of this disease. In the discussion referred to, the two great champions of opposite theories were antagonistic, and we see in this discussion the avowed representation of two distinct schools, known as those of "absorption" and "essentiality;" and each one advocates a method of treatment naturally suggested by, and in accordance with his peculiar views: the one strongly favoring the antiseptic method as preventing absorption; the other looking upon the lochia as the natural cleanser of the parturient canal, and making antiseptic injections of no value.

What then, said the speaker, is puerperal fever? He defined it generally as a febrile condition occurring in a woman, usually within from two to four days after the termination of pregnancy, either at full term or prematurely, characterized by typhus symptoms, high temperature and frequent pulse, rapid formation of local centres of inflammation, suppuration and gangrene, metastatic abscesses, emboli, a violent phlogogenous condition of the blood, and, unless arrested, running on rapidly to disorganization and death. All are agreed as to the condition in which the woman is found at the time when she is subject to puerperal fever. The condition before the tearing away of the ovum from its intrauterine attachment, the state of the body in which, as Tarnier says, "There is hardly a single fibre or drop of blood which has not experienced some modification." The active processes of the production of materials on the blood, the hypertrophied or hyperplastic condition of the uterus and its appendages, everything actively growing and helping to form the new being; all is growth, the preternatural vitality often requiring the interference of medical art to maintain it within wholesome limits. The elements intended for the growing child crowd on the mother's organs, and processes become morbid from unrestrained activity. But labor comes on; the fœtus is removed, the demand for production ceases, and the matter being made for the growing ovum becomes superfluous, useless, and, therefore, a pernicious element to be gotten rid of by nature as soon as possible, by absorption and excretion. Dr. Thomas suggested the tendency of the hyperinosis of the blood to produce thrombosis, and thence to the development of sepsis. But we have also the element of traumatism: the placental site with its fresh, raw surface, the extraplacental surface of the uterus, have been likened by Eustache to a vesication, ready at all times for absorption. Every cervix which has had a show in labor is the seat of a raw surface, after labor, for the absorption of septic matter.

Dr. Barker calls these conditions physiological; but they are conditions easily turned in the scale toward disease. The tears of the cervix and such injuries are surely traumatic; and we can call the inflammatory conditions and the phlegmons of the connective tissue physiological processes. If nature be unobstructed and vitality good, and still retrograde change goes on whilst

no new element of a toxic nature is introduced into the system, is it physiological?

The speaker then referred to the theory, advocated by Braxton Hicks, that puerperal fever is the result of the entrance of scarlatinal and other exanthematous poisons through the lungs, and its development in its own proper type after delivery.

He spoke also of the theory recently advocated by Dr. Kinkead, by which he believes that the puerperal woman has no puerperal accidents except those resulting from direct surgical injuries of the parturient canal, unless there is brought to her, by the physician or otherwise, the atmospheric miasma, or the digital collections from some exanthem.

He then considered the *Absorptionists* or *Infectionists* represented by Dr. Thomas; and, further, the views held by the followers of Semmelweiss (1847) and Pasteur (1872); and the views of the Pangermists, who cannot accept septic poisoning without the intervention of germs; and that, multiple or simple in its nature, however variable its morphology, the microbe is necessary before infection can be produced in the lying-in woman.

In concluding his address, Dr. Smith said that he had no fear of intrauterine injections. His rule is to wash out the vaginal canal certainly, and the uterine cavity if there is reason to believe that it contains clots, or if there is a decidedly patulous condition of the os. He does this with hot water, 115° Fah., and bichloride of mercury (1:1000). If properly administered, this can do no harm. The injection should be given through a return-current tube. The only portions of the coagula in the sinuses which could be disturbed would be that extending into the uterine cavity; and that had better be washed off at any rate. By using the proper tube, or making sure that the os is patulous, no fluid can pass through the oviducts; but even if it did, better that now than pus later. With a careful operator there should be no question of air entering the veins; the syringe should be full before approaching the vulva, and the stream started before its introduction into the canal. This washes everything, and is absolutely preventive of air getting into the veins.

At the conclusion of his address, Dr. Smith exhibited an improved form of uterine irrigation tube, consisting of a long, curved, glass cylinder, perforated at the uterine end with large holes, and containing a central rubber tube for the conveyance of the irrigating fluid.

DR. REAMY moved that the thanks of the Society be tendered Dr. Smith for his interesting and able address. Carried.

DR. JENKS, of Detroit, then opened the debate on Dr. Mundé's paper, entitled

CERVICAL FIBROIDS AS A CAUSE OF DYSTOCIA AND THEIR REMOVAL BY VAGINAL ENUCLEATION.

He thought such cases were of rare occurrence. He had met with but one case of dystocia from cervical fibroid. This tumor was small; it was removed by incision and enucleation. Although in favor of the line of treatment adopted by Dr. Mundé, he was not an enemy of the Cæsarean operation, especially when performed early.

DR. WILSON, of Baltimore, had never met with a cervical fibroid complicating labor, but would adopt the treatment outlined by Dr. Mundé in case of such an event. The time for the operation should be prior to labor. He had removed eight fibroids, varying from four to twenty ounces in weight, from the body of the uterus by a similar method.

DR. BYFORD, of Chicago, did not agree with all the conclusions of Dr. Mundé; whether the tumor was sessile or pedunculated, he would wait until labor began for two reasons: (1) Large tumors will be pushed out by the descending presenting part; (2) The child's life will be saved. Two cases, in point, had occurred in his own practice. The first tumor, weighing about twenty ounces, was peeled out of its capsule and crushed by the descending head; the second tumor was dislodged in a similar manner and appeared at the vulvar orifice, where it was easily enucleated. There is the same danger to the mother in labor at full term, and less danger to the child, but no increased risk of septicæmia.

DR. DUNLAP had had no experience in this class of cases, but he could easily imagine that instead of being surrounded by a connective-tissue capsule, the muscular substance of the tumor might be directly continuous with that of the *corpus uteri*. In such event, enucleation would be difficult, and there would be great danger of hemorrhage. It was impossible to tell beforehand whether or not the fibroid was surrounded and isolated by a connective-tissue capsule.

DR. VAN DE WARKER, of Syracuse, had seen a case somewhat similar to the case of Dr. Mundé. The tumor occurred in the posterior cervical lip of a young Jewess. The forceps was applied before Dr. Van de Warker's arrival, but to no purpose. Cæsarean section was performed; the child lived, but the mother died. The autopsy showed that enucleation would have been perfectly feasible.

DR. REAMY, of Cincinnati, had seen a case in which the fibroid was located in the posterior lip of the cervix, but extended up above the internal os. The presence of the tumor was not suspected until the woman fell in labor. The capsule was incised, and the tumor enucleated. Both mother and child recovered.

Dr. Reamy thought that, while individual considerations of individual cases must govern their treatment, it was better to defer enucleation until labor had actually commenced. He thought that if the tumor did not interfere with dilatation of the os, enucleation was much easier at this time. At no period during gestation is the woman less liable to sepsis. Notwithstanding the enormous development of the lymphatics, he thought there was considerably less risk of infective absorption.

DR. MUNDÉ closed the discussion. If the tumor was growing rapidly and endangering the woman's life, he thought the immediate operation of absolute importance. If the tumor was of moderate and constant size, he would wait until labor began. Schröder had deferred his case from the third to the ninth month. The patient came very near succumbing to *post-partum* hemorrhage.

DR. THOMAS once saw a case in consultation with Dr. Hanks and performed Cæsarean section. This was before the invention of the serrated spoon. The operation proved fatal to the mother. Under similar conditions, in another case, he would enucleate. The serrated spoon was an invaluable instrument. The

volsellum forceps is not the best instrument for traction upon the tumor. There is room here for a new instrument.

Dr. T. GAILLARD THOMAS, of New York, then read a paper entitled

A FURTHER REPORT UPON EXTRAUTERINE PREGNANCY, EMBODYING SIX CASES.

Before reading his paper, Dr. Thomas made some interesting remarks about, and exhibited a mediæval relic, which had recently come into his possession. Dr. Thomas spent the past summer in a little, out-of-the-way Long Island village.

A friend in this little village had recently received, as a bequest, from France, some thirty large, old-fashioned trunks. These trunks contained old MSS., books, jewelry, dresses, and odds and ends of all description. In one of the trunks a very peculiar harness, which puzzled the gentleman, was found. It was submitted to Dr. Thomas; upon examination, it was found to consist of a jointed steel girdle, covered with velvet—intended to encircle the waist of the wearer—and a semicircular rod of solid steel, with two circumscribed dilatations, joining the circular girdle at right angles. It was evidently meant to be employed in the same way, though for a different purpose, as the female T bandage. The diamond-shaped dilatation, intended to fit accurately the vulvar orifice, was guarded upon both sides, on the inner edge, with sharp steel teeth, pointing downwards, forwards, and outwards. The circular ring designed for the anal orifice was provided with steel teeth in an identical manner. Armorial bearings were discovered upon different portions of the harness. Behind, at the point of junction of the girdle with the perineal rod, was the place for a lock, or rather seal. The diagnosis was plain. It was a *ceinture*, similar in shape and design to the girdle of *Diana de Poitiers*, which every one who visits Paris sees in the *Musée de Cluny*. The Crusaders were evidently in the habit of locking up home effects before their departure to the wars.

Proceeding with the subject of his paper, Dr. Thomas said that at the meeting of the Society in 1882, he had read a paper upon extrauterine pregnancy, embodying twenty-one cases. Since that time he had seen six cases. The diagnosis of extrauterine pregnancy was difficult, and until within the last ten or fifteen years, much more so. As the Fallopian tube usually ruptures, in case of tubal pregnancy, before the fourth month, the necessity of early diagnosis was obvious. The methods of diagnosis were then briefly discussed.

As regards frequency, extrauterine pregnancies were of excessively rare occurrence. Baudl has collected only five cases in seven years, out of 60,000 cases of labor, occurring in the wards of Braun and Spaeth. Dr. Thomas's experience of twenty-seven cases was exceptionally great, and ought to represent between 300,000 and 400,000 labors, or 18,000 gynecological cases, every year for eighteen years. Most of these cases were seen in consultation. He had seen few conditions, from impacted feces to phantom tumor, which had not been mistaken for ectopic pregnancy. It was necessary (1) to make an accurate diagnosis—not easy during the first four months, and (2) to perform in a bold and unflinching manner the operation indicated. It was necessary, also, to cast aside Depaul's *dictum*, that diagnosis, during the first four months of extrauterine pregnancy, was impossible.

The experiments of Leopold, of Leipzig, (*Archiv für Gynäkologie*) had thrown much light upon the theory of this class of cases. This experimenter had placed, within the abdominal cavities of rabbits, embryos of different ages, electric currents of different characters were then passed through the embryos, and autopsies subsequently performed. Leopold, from these experiments, concluded that rupture of the fœtal capsule was more frequent than is generally supposed, and that the dead embryo is usually encapsulated, and remains as a harmless foreign body. Twenty years ago Dr. Stevens Roberts, of New York, wrote a paper on laparotomy, as indicated by this class of cases. He, however, had no actual experience. In January, 1883, Lawson Tait published four recoveries after laparotomy for this condition. In October, 1883, Dr. C. K. Briddon, of New York, described several successful operative procedures under similar conditions.

Dr. Thomas then spoke of his last six cases, giving very full histories, in which no autopsies had been performed.

Case I.—Dr. Ferdinand Beach, of New York, summoned Dr. Thomas in consultation, to see a case of extrauterine pregnancy occurring in a woman twenty-seven years old. When Dr. Thomas saw the woman she was in collapse, from which she partly rallied. On aspiration four fluidounces of amniotic fluid were withdrawn. Laparotomy was contraindicated by the feeble condition of the patient. The autopsy revealed a fœtus of four months in Douglas's pouch, and the remains of extensive peritonitis. Laparotomy would certainly have proved fatal.

Case II.—Summoned in consultation by Dr. Elizabeth Cashier. Diagnosis of extrauterine pregnancy, not advanced to the fourth month, in a woman thirty-two years old, was the result of the visit. The fœtus was killed by means of the electric current and the patient recovered.

Case III.—Diagnosis of extrauterine pregnancy, not advanced to the fourth month. The interrupted and continuous current was applied, under the supervision of Dr. A. J. McKosh. Patient recovered.

Case IV.—This case was brought to Dr. Thomas by Dr. John Lambert, A similar treatment was instituted with like result.

Case V. presented few points of difference in diagnosis, treatment, and result from Case IV.

Case VI. was a case of abdominal pregnancy, advanced beyond the fourth month. Laparotomy was performed, and the fœtal nidus, weighing sixteen pounds, removed. The placenta, attached to a number of points about the small intestines and colon, was ligatured around its edges by the cobbler's stitch, and cut away. These edges were brought to the abdominal incision, and sewed in position, to use an expression of Dr. Pallen's, marsupializing the woman. The patient made an excellent recovery.

In three cases, in which gestation had proceeded respectively to the seventeenth, twelfth, and eleventh month, he had seen the happiest results from allowing the placenta to slough off through the abdominal incision. He recommended waiting, after the fourth

month, as long as possible. If the extrauterine pregnancy is protracted beyond the period of normal gestation the placenta shrinks up and tends to shrivel away.

Dr. Mundé briefly narrated the history of a successful case of arrest of tubal pregnancy by galvanism, published in the *Medical Record*, September 27, 1884. In conclusion, he referred to two cases of tubal pregnancy, operated upon, by laparotomy, by Veit; he alluded to two similar cases treated by abdominal section occurring in Lawson Tait's practice.

Dr. Palmer said that the latest time for the application of electricity had been formally stated by Dr. Thomas to be the fourth month; why was it now changed to the fifth month?

Dr. Wilson had seen two cases of extrauterine pregnancy. The first case was treated by electricity with a favorable result. The second case became the subject of abdominal section and died. Would Dr. Thomas perform laparotomy at term, or wait until some subsequent period?

Dr. Howard, in answer to Dr. Harvey's inquiry as to whether or no involution of the uterus occurred after the death of the fœtus, narrated the history of a case he had recently seen, under Dr. Thomas Keith's care, in Edinburgh. The uterus was enlarged, in this case, subsequent to fœtal death.

Dr. Baker narrated the histories of four cases of extrauterine pregnancy, which he had seen in consultation. The first case,—tubal pregnancy, advanced to the sixth week,—after the performance of laparotomy, died. Laparotomy was performed in the other three cases with successful results.

Dr. Thomas closed the discussion by saying that the best time, as a limit to the application of electricity, was about four and a half months. No hard and fast rule could be laid down. He would perform laparotomy at full term, in case the fœtus was alive; if not, he preferred to wait several months, in order to secure shrinkage of the placenta.

Dr. R. B. Maury, of Memphis, then related a case of

TUBAL PREGNANCY, WITH RUPTURE OF THE SAC.

The patient, thirty-seven years old, five children, youngest eight months old, came under observation September, 1883. Symptoms led to the diagnosis of tubal pregnancy, with rupture of sac. Patient made a good recovery by January 1. Dr. Maury concluded by a careful review of the literature and mortality statistics of operative procedures instituted for the relief of this condition.

A BUSINESS MEETING

was held at 8.30 P.M., and the following were elected

OFFICERS FOR THE ENSUING YEAR:

President.—William T. Howard, M.D., of Baltimore.

Vice-President.—Drs. W. L. Richardson, of Boston, and Paul F. Mundé, of New York.

Treasurer.—Dr. Matthew D. Mann, of Buffalo.

Members of Council.—Drs. A. Reeves Jackson, of Chicago; H. P. C. Wilson, of Baltimore; Joseph Taber Johnson, of Washington; and Ely Van de Warker, of Syracuse.

The limit of the number of Fellows was raised to 100. No new Fellows were elected.

(To be concluded.)

THE NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, October 2, 1884.

THE PRESIDENT, FORDYCE BARKER, M.D., LL.D., IN THE CHAIR.

Dr. Francke H. Bosworth read a paper on

THE THREE TONSILS—SOME PRACTICAL SUGGESTIONS IN REGARD TO THEIR STRUCTURE, FUNCTION, AND DISEASES.

He said that the views which he had for some time entertained in regard to the three tonsils, while contrary, for the most part, to the generally accepted opinion, would, he believed, if true, serve to clear up much that was now vague on the subject, and also give a more practical direction to therapeutical measures in the management of the commoner forms of disease in the fauces. Having explained that by the three tonsils he meant the two glandular masses between the pillars of the fauces, to which the name tonsil was usually applied, and that mass of glands found in the vault of the pharynx first recognized by William Hunter, and to which the name of pharyngeal tonsil had been assigned, he went on to say that, in his opinion, the description of the faucial tonsils usually given in the text-books was incorrect in several particulars. They were not organs of the body in the sense that the liver and spleen were organs, and, therefore, in this sense, had no especial functions to perform in the economy. In his work on *Diseases of the Throat*, he had subjected himself to criticism by the assertion that in the healthy throat there were virtually no tonsils, and this opinion he still maintained. The "almond-shaped organ covered by a fibrous investing membrane or sheath," which was described by anatomists, had no existence in a healthy throat; but was the result of a morbid process. No portion of the mucous tract probably demanded a greater supply of mucus in the performance of its functions than the upper air-tract. In this region, therefore, the muciparous glands were found not only richly distributed throughout the membrane, but also aggregated in masses, and this tendency to aggregation was especially noticeable in the pharyngeal vault and between the pillars of the fauces. In a condition of health these aggregations of glands did not project prominently from the membrane, and, hence, in a perfectly healthy state their existence was not easily demonstrated by gross inspection. The mucous membrane of the upper air-passages, however, was peculiarly liable to be the seat of morbid action, and while in adults it was the mucous membrane proper which was most liable to be affected, in children the glandular structures were especially susceptible. The tendency of chronic inflammatory processes was to develop hypertrophy, and, hence, a moderate hypertrophy of these glandular masses was found of exceedingly frequent occurrence in young people.

In connection with this point, he alluded to the anatomy and functions of the upper air-tract, and laid special stress upon the fact that the pharynx was in reality composed of two cavities, differing materially in structure and function; the upper pharynx belonging to the air-tract, and the lower pharynx to the food-tract. This view, he thought, was still further sustained by the circumstance that an inflammatory process in the one

region did not, as a rule, involve the other. The lower pharynx was perhaps the most exposed region of the mucous tract. It was, therefore, a hard, dense membrane with but few glands; and in order to compensate for this deficiency it was surrounded on three sides with large aggregations of glands, constituting the so-called three tonsils. The sole and only function of these masses of glands was, he believed, to supply mucus to lubricate and moisten the lower pharynx; and the resemblance of the faucial and pharyngeal tonsils was so close that the only difference in structure was easily accounted for by the fact that the pharyngeal tonsil was protected from any impact of foreign substances, and was, therefore, of a soft and spongy consistence; containing connective tissue less in amount and less firmly organized than the faucial tonsils.

From a pathological point of view, still further grounds were found for grouping the three tonsils together, for the same morbid processes which occurred in the faucial tonsils were met with in the pharyngeal tonsil. These were: acute inflammation; chronic inflammation, resulting in hypertrophy; acute follicular inflammation; croupous inflammation, and diphtheritic inflammation. Having remarked in passing, that quinsy was not a disease of the tonsil, but rather an inflammation of the cellular tissue of the soft palate or neighboring parts, and that phlegmonous inflammation did not occur in the tonsil; he stated that the only form of acute inflammation met with in the tonsil was a catarrhal inflammation, attended with hyperæmia, swelling, and hypersecretion, and usually described under the term subacute inflammation. The attack, which was generally the result of exposure to cold, was not of any serious import, and ran its course in from four to seven days. The predisposing cause was enlarged tonsils, and it occurred in children more frequently than in adults, simply for the reason that enlarged tonsils were most frequently met with in children. The affection occurred in the pharyngeal tonsil with the same frequency as in the faucial tonsil, and was attended with the same moderate constitutional disturbance. It would easily be understood, he said, how, in the case of a mild inflammatory process occurring in the pharyngeal tonsil, the symptoms would be mainly nasal. The attack was what was usually regarded as a cold in the head, and was often called an acute coryza; which, he thought, was a frequent error. As he had before remarked, the glandular structures, and not the mucous membrane proper, were the parts generally attacked in children, and their colds, if in the throat, were in the faucial tonsils, and if in the nasal passages, were in the pharyngeal tonsil, rather than in the nasal membrane.

Acute follicular tonsillitis consisted of an inflammatory process, involving one or both tonsils, which was characterized by the exudation into the crypts of the glands of a fibrinous material which filled and distended their cavities. In a paper which Dr. Bosworth had read before the American Laryngological Association, in May last, he had taken the ground that this disease was an essential fever, with a local manifestation in the throat, something in the nature of one of the exanthemata; and in the same paper, he had called attention to the fact that the same disease occurred frequently in the pharyngeal tonsil.

Croupous tonsillitis he regarded as the same disease as the latter, with an eruption which was more marked or efflorescent; a broad membrane covering more or less the whole face of the gland, being found in place of the small, pearly-white spots met with in follicular tonsillitis. The same membrane he had frequently observed on the pharyngeal tonsil, and its appearance was attended with the same general symptoms as in the faucial disease.

In regard to diphtheritic tonsillitis, he remarked that a diphtheritic membrane on the faucial or pharyngeal tonsil occurred in connection with the blood-poison of diphtheria, and that wherever it might be developed, its clinical significance was the same.

Hypertrophy of the faucial tonsils, which occurred mostly in young people, and showed a tendency to subside at puberty, gave rise to a train of symptoms which were mainly due to the mechanical pressure of these glandular masses; while their development was the result of a purely local morbid process, and not, as a rule, the outcropping of any of the constitutional diseases. Hypertrophy of the pharyngeal tonsil had been described by many writers usually under the heading of adenoid tumors, or vegetations at the vault of the pharynx; but in all its aspects, except as regards location, he believed it to be identical with the faucial disorder. In this view, enlarged tonsils in either region were simply masses of diseased glands, whose functions had, in the main, been abolished or prevented by the morbid process which had fixed itself upon them. If the hypertrophy had gone to the extent of developing a glandular mass, which by its presence interfered with the function of the parts, or which in any way gave rise to serious symptoms, the diseased structures ought to be extirpated. Otherwise the condition required no treatment.

It was sometimes suggested that a portion of the tonsil might be removed, but not all; but he could see no more reason for this than for the removal of only a portion of any other morbid growth, such as a fibroid, for instance. The danger of hemorrhage after tonsillotomy had often been urged as an objection to the procedure; but this danger, he believed, was overestimated, since literature recorded no fatal case, so far as he knew, with the exception of those instances in which the carotid artery was cut, and this he considered an unpardonable blunder. Hemorrhage never occurred in the operation upon children, since in them the nutrient artery of the tonsil was small, and always collapsed easily; but in adults, hemorrhage after tonsillotomy was almost the rule. He had never seen a case, however, in which the bleeding was not promptly arrested by the application of a wire heated to a dull-red heat. As regards the removal of the pharyngeal tonsil, he had nothing to add to what he had said in a paper previously read before the Academy, and published in the *Medical Record* of January 13, 1883.

Quinsy. For three years he had entertained the view that quinsy was not a disease of the tonsil, and in that time he had carefully watched and examined the cases coming under observation. In every instance he had been able to demonstrate satisfactorily to himself and others that the tonsil was not involved directly in the inflammatory process, quinsy being, in his opinion, as he had mentioned, an acute cellulitis of the areolar tissue of the fauces. It was true that the tonsil often-

times presented a red and angry appearance, but this was always secondary, and due to the fact of its nearness to the phlegmon. Occasionally, too, the tonsil was very prominent, being lifted from its bed, and at times projecting far toward the opposite side of the fauces; but this was due to the fact that the phlegmon was situated behind it. The cause of quinsy he believed to be in very many cases the rheumatic habit, as had been suggested by many old writers. Dr. Bosworth then gave a summary of 133 cases of quinsy which he had seen during the last three years. In 115 the phlegmon was in the soft palate, in 11 in one or the other of the posterior pillars of the fauces, in 2 beneath the tonsil, and in 2 in the wall of the pharynx. In many cases there was the clinical history of attacks of rheumatism, either arthritic or muscular. The proportion of such cases had not been definitely noted, but he thought it was fully 60 per cent. The connection between the two diseases seemed to be further evidenced by the fact that a large number of cases of quinsy were aborted by the early administration of the salicylates. In those cases in which the attack was not aborted suppuration seemed to be very much hastened, and the form in which the remedy was administered was as follows:

℞.—Sodii salicylatis, ... ʒiij.
Aquæ, ... fʒvi.—M.
Sig.—One tablespoonful every two hours.

Last spring Dr. Barber had suggested to him the value of bicarbonate of soda locally applied, and he had since then made use of this remedy (although in connection with the salicylates) with gratifying results in one or two cases. In several cases in which the quinsy habit had existed he had given the above prescription of salicylate of soda, with directions to commence its use immediately upon experiencing any symptoms of these attacks, and in no one of them had there been an attack of the disease. If the attack was not abated by medication, it seemed to him that it was of importance to recognize and treat the disease, as far as the local process was concerned, like an abscess in any other portion of the body; and in this connection he urged the importance of digital examination of the fauces.

The President remarked that many of the ideas advanced in the paper were novel to him, and were of such a nature that they could only be discussed intelligently by those who had directed special attention to the throat; but there were some points in it which were eminently practical, and which were of the greatest interest to the general practitioner, as well as the specialist. Every medical man was liable to meet with cases of quinsy; for instance, in his own practice he had met with patients who were subject to attacks of this disease every one or two years, and the affection sometimes gave him no little trouble. Sometimes he used to think that he was able to avert the attack by the use of large doses of quinine, in connection with opium, and four years ago he had commenced to employ bicarbonate of soda locally in quinsy in addition to the internal use of the remedies just mentioned. He could not now remember how the use of soda in this connection had first been suggested to him; but since he had commenced its employment, not a single case, in which he had had the opportunity of recommending it sufficiently early, had gone on to suppuration. In some of the cases, indeed, which were even quite late and in which suppuration seemed unavoidable, resolution had taken place, and in this connection he related a striking case which he had seen for Dr. Bosworth.

Dr. Douglas said that there were a few things in the paper to which he must take exception; but, in general, his judgment accorded with it. In regard to quinsy, he had already expressed an opinion substantially in agreement with that of Dr. Bosworth. He considered it as in reality a rheumatism or a gout, and personally he had met with it more frequently in the gouty than in the rheumatic. Thus, he had often seen attacks of quinsy alternately with those of gout; the patient one year suffering from one, and the next from the other. The treatment which he generally adopted was in the main the same as that which had been suggested. For many years he had been not only in the habit of recommending the local application of bicarbonate of soda by means of the finger, as Dr. Barker had advised, but also of using it as an injection to be thrown into the posterior nares. Inflammation of the posterior nares he regarded as a frequent cause of the tonsil trouble. The soda had the effect of liquefying the secretions, and its use always afforded a great deal of comfort to the patient. In connection with local measures he also employed the ordinary constitutional treatment for gout or rheumatism.

As to the statement made by Dr. Bosworth, that the tonsil did not appear at all in the healthy throat, he believed that this was strictly true. He also thought that the same condition which resulted from irritation in the glands constituting the so-called tonsils was very liable to occur in the group of glands at the base of the tongue, and here, too, the treatment by bicarbonate of soda was of great service. In addition, however, he was now in the habit of using a remedy which had recently been introduced for the relief of neuralgia, viz., menthol. This he employed as a spray, in the form of a powder consisting of one part of menthol to one hundred of sugar of milk. He could not agree with Dr. Bosworth that these hypertrophic structures could not be removed except by means of the knife. In his experience he had found that they could be effectually removed by a course of mild treatment; but the process was apt to be rather a long and tedious one. The application which he made for this purpose consisted of a mixture of camphor and salt, with a little ammonia. If this was used persistently with sugar of milk in the strength of five per cent., it would certainly remove enlarged glands. Before closing, he wished to call particular attention to the glands lying at the base of the tongue, to which he had referred. Their hypertrophy indicated a general dyscrasia, probably either rheumatic or gouty, and he had usually found that there was disorder of the liver in connection with this. He then mentioned another constitutional affection, which he termed infusorial catarrh, and stated that he had treated it successfully with minute doses of quinine; one-tenth of a grain, in the form of a triturate, being given every hour.

Dr. Frank H. Hamilton said that there was one point upon which, as a surgeon, he wished to be permitted to say a word. He was inclined to agree with the author of the paper that these excrescences ought to

be removed, and that this could be best done by means of excision; but at the same time, as they were met with only exceptionally after the twenty-first year, he thought it was well not to interfere unnecessarily. Possibly the lapse of time had more to do with the shrinking of the hypertrophied tonsils which Dr. Douglas had mentioned as occurring under a mild course of treatment than the remedies which he had employed. Dr. Bosworth had said that the use of the knife was unattended with danger; and he would assent to this statement, if it was qualified so as to exclude cases of acute inflammation of the tonsil and instances of the hemorrhagic diathesis. He believed that it was the venerable Dr. Gibson who had first enunciated that it was sufficient to remove a portion of the hypertrophied tonsil; but this he thought to be a grave error.

DR. ABRAHAM JACOBI expressed the opinion that when the tonsils had once become permanently enlarged, they were amenable to no other treatment than the use of the knife. This opinion was based, in the first place, on experience, and he agreed with Dr. Hamilton that if the growth apparently became diminished under such a mild course of treatment as Dr. Douglas had described, it was in reality due to the lapse of time. The relation of the tonsils to the surrounding parts became very appreciably altered as the individual grew older. The pharynx of the child was very small, but as the age advanced it grew longer, and consequently a hypertrophied tonsil which in early childhood might seem a very serious matter, would, after the course of years, appear very much smaller, although no actual change might have occurred in its size. In many instances, however, as time passed, the growth became not only relatively, but actually smaller. The hypertrophied tonsil became a hard, dense mass, consisting for the most part of elastic tissue, and he did not believe that any treatment, except that which destroyed, would have any effect upon it. As to the matter of hemorrhage, the tonsil when cut into (unless it was in a state of active inflammation) would bleed but little, as a rule. Sometimes, however, there was severe hemorrhage; but this was almost invariably from some other part. In some cases, for instance, the tonsil could not be excised without removing also a portion of the soft palate. When such hemorrhage had occurred, he had used both styptics and the red-hot iron, and had failed to control it. The only really effectual means to use, he had found, was digital compression. The time that it was necessary to keep the finger in contact with the bleeding surface, differed in different instances, and in one case he had been obliged to keep up the compression for a whole hour. He had seen an adult lose as much as a quart and a half of blood after tonsillotomy.

He could not agree with Dr. Bosworth in considering follicular tonsillitis as an essential form. He preferred to regard folliculitis as a local affection, in which only a few, or perhaps but a single follicle might be involved; but in those cases which seemed to suggest an essential form, he did not think it necessary to seek for a new one, since they were sufficiently explained by one of two essential forms already recognized, viz., influenza and diphtheria. He believed there was great danger of overlooking genuine cases of diphtheria. The constitutional symptoms might be present, but the local manifestations entirely escape notice on account of their location. Again, diphtheria might be an exceedingly mild disease, giving rise to no fever or constitutional disturbance whatever; but it was always characterized by a membrane, and that membrane showed contagion. Even though of this mild type, the disease was always to be regarded as malignant, since from the lightest case other individuals might contract the most severe form of the affection. He had seen so-called folliculitis give rise to undoubted diphtheria in other members of the family, and, hence, he thought there could be no doubt that they were really cases of diphtheria. He did not mean to say that he considered every case of follicular trouble diphtheria; but at the same time he thought it could not be too strongly impressed on the minds of medical men that many cases of diphtheria were very light and closely resembled folliculitis. The idea was still too prevalent that diphtheria was almost necessarily fatal, and that if the case was light, it could not be genuine diphtheria. In reality, however, there was much more danger to the community from these light cases than from the more serious ones, on account of the lack of precaution that was likely to be taken. This matter he considered of great practical importance from a sanitary point of view.

DR. LEONARD WEBER doubted whether the idea that quinsy was of gouty or rheumatic origin were true, and thought that in accepting it we were probably following too closely the English writers, since in England gout was a much more common disease than in this country. He recalled fifteen or twenty cases of quinsy which he had treated, the patients being of all ages; and said he had yet to meet with the first instance in which there seemed to be any well-founded connection between the disease and a constitutional dyscrasia, such as the alternation of gout and quinsy in different years, which Dr. Douglas had mentioned. As to the treatment by internal medication, he had had no experience. He was always in the habit of evacuating the abscess as soon as possible, and in order to accomplish this he was accustomed to make frequent digital examinations.

THE PRESIDENT alluded to the articles on the use of guaiac in quinsy, which appeared in the early numbers of the London *Practitioner*, and said that he had tried the remedy faithfully but had never succeeded in getting any satisfactory results from its use.

DR. ALFRED C. POST said that he was in the habit of resorting to excision in the treatment of hypertrophied tonsils, and that in his experience the hemorrhage was slight. Even if it were possible to reduce their size by a prolonged course of treatment, he thought the use of the knife was preferable.

DR. HAMILTON said that, in speaking for a second time, he wished merely to call attention to what he considered the best and most expeditious method of controlling hemorrhage after tonsillotomy, and that was the application of cold in the form of the ice or snow "cravat."

DR. FRUITNIGHT mentioned the abortive treatment of quinsy by means of tincture of aconite root, as suggested by Sidney Ringer. In three cases he had himself successfully aborted attacks of the disease by giving one drop of aconite every hour for five or six hours.

DR. W. S. JARVIS said that in most respects he endorsed the opinions of Dr. Bosworth, and he thought that the latter deserved great credit for his original researches in regard to acute follicular tonsillitis, the

pharyngeal tonsil, and the pathology of quinsy. In regard to hypertrophy of the faucial tonsils, he did not doubt that the masses could be removed by the application of such caustics as chromic acid and chloride of zinc; but, as a rule, such treatment was too slow, the condition of the patient requiring that they should be removed at once. In regard to the question of hemorrhage, and as to whether the bistoury or the tonsillotome should be employed for excision, there was a difference of opinion among various authorities. His own experience had taught him that there was one class of tonsils which ought not be removed with the knife, and another in which the knife should certainly be used. The first kind was the hard or cirrhotic tonsil, which was generally met with in syphilitics, and if this were cut into, severe hemorrhage was almost sure to result. Hence, the knife was to be avoided entirely in this class of cases, and the cautery or snare used in its place. The second kind, in which the knife was always applicable, was the soft tonsil, and this could be readily differentiated from the other. As to the amount of tissue to be removed, he was among those who thought that a certain portion of the mass should be allowed to remain. There was one function of the tonsil, he believed, to which attention had not as yet been called, and that was, that it formed a pad for the protection of the internal carotid artery from injury, and hence it was not advisable that the entire gland should be taken away.

DR. BRANDEIS said that he had been rather startled by some of Dr. Bosworth's statements in regard to the physiology and pathology of the tonsils. While, however, he was satisfied in his own mind that these organs served some useful purpose, he was quite willing to acknowledge that a diseased tonsil was worse than no tonsil at all, and should therefore be removed. The advantage of the tonsillotome over the knife, he thought, was not sufficiently recognized. In the first place, it not only cut off, but crushed the diseased organ. Again, in using the bistoury or scalpel it was necessary first to draw out the tonsil with vulsellum forceps, and the natural relation of the parts was thus disturbed; which was not the case when the tonsillotome was used. Still another point was, that with the latter a perfectly vertical incision could be made; while with the knife, the incision was necessarily semilunar, so that the inferior portion of the organ, which was generally the part most affected by disease, could not be successfully removed. The tonsillotome which he preferred to all others was Mackenzie's modification of Physick's instrument; its great advantage being that the blade was pushed from before backwards, instead of being drawn from behind forwards, as was the case in most others. There was rarely any hemorrhage, and after the operation the patient was directed to sip slowly a glass of water mixed with half an ounce of tannic acid. In the only case in his experience in which there had been any serious hemorrhage, he had been able to control it with success by a finger on the cut surface and the fingers of the other hand externally over the carotid artery. Unlike Dr. Bosworth, he had found that children were never more liable to hemorrhage after tonsillotomy than adults. He confessed that he had been somewhat chagrined at Dr. Bosworth's explanation of the pathology of quinsy, since he was at present engaged in the preparation of a paper on peritonsillitis, a name which Fränkel had originated. He did not deny that quinsy was sometimes an inflammation of the fibrous and cellular sheath of the tonsil; but to say that all cases of the disease were of this kind, he thought, was going too far, since many cases seemed to be limited to the aggregation of follicles. In conclusion, he referred to the supposed constitutional origin of quinsy, and mentioned that many years ago Hope had lauded guaiac as a specific for the disease. Personally, he was in the habit of using one drop of aconite with fifteen or twenty drops of the ammoniated tincture of guaiac for the purpose of aborting attacks of quinsy, and if the cases were seen in time the method was generally successful. As a rule, however, the cases were not seen until too late for this.

DR. J. LEONARD CORNING related a case of very severe hemorrhage after tonsillotomy which he had controlled perfectly in thirty seconds by means of an instrument which he had devised for compressing the carotid artery.

DR. BOSWORTH, in closing the discussion, said that the paper was a very brief one, and that it was impossible within its limits more than to glance at many of the points to which he desired to call attention. He had not stated that the reduction of genuinely hypertrophied tonsils was impossible without the use of the knife, but that this could not be done by means of local astringents. In this condition the connective tissue was organized and contracted in the same manner as in cirrhosis of the liver or the lungs. In regard to hemorrhage after tonsillotomy, he believed that it was never obstinate in children, and thought that the statement of Guersant, who had performed the operation in seven thousand cases in children, was conclusive on this point. Hemorrhage was almost invariably from the nutrient artery, which was situated about the junction of the upper third with the lower two-thirds of the tonsil, and he believed that the one absolutely safe measure for controlling it was the repeated application, from above downwards, of the heated wire. There was nothing better for the purpose than an ordinary knitting needle.

In follicular tonsillitis there was almost always a fully developed chill, followed by a febrile movement in which the temperature rose to 103° or more. In some instances he had seen the constitutional disturbance as great as in typhoid fever, and he could not understand how such a condition should be simply symptomatic. The disease ran a definite course, and resembled the exanthemata in many other respects, although one attack had no effect in preventing a future recurrence. It seemed necessary, therefore, to recognize that it was something more than a purely local affection. The relation of follicular tonsillitis was a matter offering a very wide field for study, and in regard to which there was much yet to be explained. He could only remark in passing that he believed they were both bacterial diseases; that the germs of both were of very closely connected origin. He next referred to the investigations, in regard to the treatment of quinsy, made by Lauder Brunton, and recorded in the *Practitioner* ten years ago, to which Dr. Barker had alluded, and said that the answers that Dr. Brinton received to his circular of inquiry constituted a literary curiosity. The remedies recommended were about a hundred in number; but a majority of the medical men who replied gave the preference to guaiac.

One of the most important points of his paper, Dr. Bosworth thought, was in regard to the abortive treatment of quinsy, and the therapeutic measures which he had adopted with success for this purpose seemed to indicate a distinct relation between this disease and rheumatism. Dr. Brandeis had spoken of the function of the tonsil; but if he was correct in his opinions, the tonsil was simply a disease, and, consequently, could have no function. Neither did it have any sheath; but peritonsillitis, he thought, was a useful term to employ. The connection between the tonsils and quinsy was purely an incidental one, depending on the location of the former; and patients whose tonsils had been removed were quite as liable to have quinsy as those in whom the operation had never been performed.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, September 25, 1884.

THE PRESIDENT, JAMES TYSON, M.D., IN THE CHAIR.

DR. GUY HINSDALE exhibited

A PHANTOM BRAIN,

constructed in colossal proportions and intended to show the course of the fibres in the human brain and their relation to the several nuclei and the spinal cord. The model has been recently purchased for the Mütter Museum of the College of Physicians, and was constructed by Buechi, of Berne, Switzerland, under the supervision of Prof. Alby.

The height is 125 cm.; its width, 70 cm. The cortex is dotted over with numerous corks 2 cm. long, which are distributed in systematic order. The basal nuclei, of a much larger size, are seen in their appropriate places. The spinal cord, made up of ganglia and columns of wires of different colors, is represented throughout a portion of the cervical region. These columns of the cord, of different colors to distinguish their function, lead to their appropriate ganglia, of corresponding color, or to the areas in the cortex, which are marked by similarly colored corks.

Taking first the anterior and lateral columns of the cord painted red, we can trace these motor fibres to the anterior and lower portion of the medulla, where they decussate, through the pons, to the internal capsule where, between the caudate nucleus of the corpus striatum and the optic thalamus, they radiate to the cortex. They are seen to come chiefly from the convolutions about the fissure of Rolando. Wherever red balls are seen, from that point a red motor fibre descends to the anterior or lateral columns. It will be seen that the column of Türck, or direct pyramidal tract, is in relation with the posterior part of the lateral column of the opposite side. As regards the exact localization of the sensory and motor tracts of the spinal cord, there is still some discrepancy of opinion. Prof. Ferrier states that the antero-lateral columns are usually regarded as the chief motor paths, but quotes the recent and careful experiments of Ludwig and Woroschiloff (1874), who place the motor paths in the lateral columns only. The anterior columns (of Türck) are regarded more as commissural connections between the motor nerves and adjacent segments, and not at least the direct paths of motor impulses proceeding from the brain.

Tracing the fibres of the posterior columns, colored blue, we find them represented as wholly decussating in the medulla, forming the posterior third of the internal capsule and passing to the corpora quadrigemina and optic thalami, colored blue, which are the great centres of sensation.

The external portion of the lateral columns, colored green, are seen to lead to the cerebellum, decussating near its superior surface. The yellow fibres of the model place the basal nuclei in communication with the cortex; the white fibres, constituting the corpus callosum, are purely commissural. The columns of the cord, as represented in the model, correspond precisely with the arrangement given by Flechsig, and endorsed by Charcot and Hammond. Ludwig and Woroschiloff argue that "a vicarious interchange of function potentially exists between different parts of the cord." Ferrier admits that, in determining the course of the cerebral fibres, anatomy reveals very little, and that physiological experiment is practically the only means at our command. Many more observations and experiments will have to be made before it can be said that the sensory and motor paths have been exactly defined and all views reconciled.[1]

DR. CHARLES MEIGS WILSON, for MR. CLINTON DENT, of St. George's Hospital, London, presented specimens from

A CASE OF INFANTILE MOLLITIES OSSIUM,

with the following history: "This specimen shows the inner vertical half of the right femur of a child, æt. 16 months. There is a pseudo-fracture of the bone. The medullary canal is filled up, and a considerable deposit of enveloping callus maintains the fragments in apposition. The entire bone is unnaturally soft, and in the recent state showed this peculiarity still more strongly. The bone was removed *post-mortem* from the body of a feeble, ill-nourished child. No history of syphilis could be gotten from the parents, and the child showed no evidence of congenital syphilis. Some of the ordinary symptoms of rickets were observable—*e. g.*, bending of the ribs, general tenderness, enlargement of the wrists, etc. No symptoms of scurvy were present. It was evident that there was much more than rickets in the condition. When the child was first admitted to the hospital, there were pseudo-fractures of the right humerus and left tibia, besides the fracture of the right femur. The humerus, which was bent at a right angle, was forcibly straightened. It bent like a bar of soft metal, and remained in its new position. It was, however, put in a light pasteboard splint. Subsequently with the removal of the splint, the bone again gradually bent and was again forcibly straightened. While in the hospital under observation, the femora became affected in the usual place, *i. e.*, a little below the trochanters. Some swelling and tenderness were noticed, and then, although the child was kept constantly in bed, the bones became bent; ultimately, in about ten days, the pseudo-fractures became complete. Great improvement of general health as evidenced by rapid increase of weight resulted from treatment of rest, good diet, and cod-liver oil. The child finally died from an attack of whooping-cough after having been under observation a few weeks."

[1] Ferrier. Functions of the Brain, p. 5, London, 1876.

This is a very rare form of bone-disease, especially in the young. It is seen occasionally in England—never with us. The pathological changes seem to be of a retrograde character. Sometimes lipomatosis takes place. Sometimes there is a metamorphosis, first to cartilage and then to embryonic tissue. This specimen shows, in different portions, both changes. The disease is attended with marked fatality. In this specimen the cortical substance is attenuated and the medullary cavity is enormously enlarged. The bone seems deficient in lime-salts. Some authorities believe that the lactic acid found in the chemical analysis of such bones is accountable for this; this fact is mentioned in order to elicit discussion. Other observers have found enormous quantities of oxalate of lime in the urine of patients with malacosteon bones. One curious fact is the effort which nature makes to repair the fractures, as shown in this specimen. This callus seems deficient in inorganic matter and eventually becomes reabsorbed. Syphilis, scrofula, and scorbutus have all been assigned as causes of the affection. Most authorities deny the existence of the disease in children, assign it to middle life, and speak of it as being lighted up or aggravated in women by pregnancy.

NEW INVENTIONS.

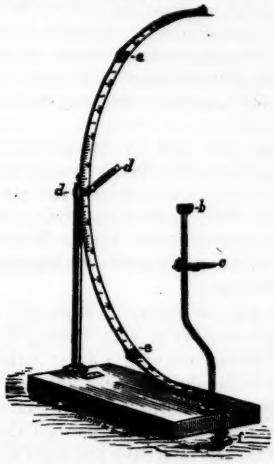
A NEW PERIMETER FOR MEASURING THE VISUAL FIELD.

BY B. ALEXANDER RANDALL, A.M., M.D.,
OPHTHALMIC AND AURAL SURGEON TO THE EPISCOPAL HOSPITAL, ETC.

As the points of mutual contact of ophthalmology and neurology increase in number and the circle of those interested in ophthalmic methods of examination broadens, the need grows more pronounced for those instruments of precision more or less essential to such studies. Such instruments are already almost hopelessly numerous; yet complexity, cost, or difficulty of manipulation exclude many from their employment. This is most distinctly the case with the primeter for measuring the field of vision; and an instrument at once simple, inexpensive, and accurate, which should demand the minimum of time in its use, has long seemed a pressing want. So time-taking has the mapping of the field generally been, that even ophthalmologists have been slow to avail themselves of the important data thus attainable; while the neurologists and general practitioners, did they possess the usually cumbersome and costly forms of apparatus now obtainable, would, probably, still more rarely employ them. Automatic registering primeters, like those of Stevens and McHardy, have done much to lessen the time-consuming difficulty; but the complexity of these instruments leaves much to be desired, while their cost puts them out of general reach.

Studying for some years over these questions, the writer has endeavored to devise an instrument fulfilling some, at least, of these desiderata; and although not yet satisfied, has planned a perimeter which seems an advance and worthy of being placed before the profession. The instrument may be described as follows:

A brass arc backed with iron, comprising a little more than a semicircle, revolves about its central point (*d*), which is supported by a rigid upright rising from a solid base of oak; a graduated disk and index at the point of rotation indicating at all times the angular inclination of the arc to the horizontal. From this central point the arc extends with a radius of curvature of 30 c. m. to 100° in each direction; both back and front being graduated, the latter in intervals of 5° except near the centre, where for 20° the single degrees are marked. The position of the examined eye at the centre of the described hemisphere is marked by a crescentic rest (*b*), against which the lower margin of the orbit may be placed, giving accurate centring and complete steadiness; while an adjustable chin-rest (*c*), added at the suggestion of Dr. James Wallace, makes the maintenance of the position easier. The fixation-point is a porcelain button marked with a small cross and carried by a slotted arm (*d'*). It is capable of being placed either at the centre of rotation or at any point within 18° of it,



thus permitting the optic papilla, the central landmark of the ophthalmoscopic picture, to be used as the centre of the mapped visual field. Upon each arm of the arc travels a small carrier (*ee*), with spring-clips to hold the white or colored objects employed in the test; even motion being secured by endless cords passing over little pulley-wheels to avoid friction, and set in motion by milled heads near the centre of rotation. A black disk fits behind the centre so as to screen the cuff and the motions of the hand in driving the carriers. The carriers cannot move past the centre, nor indeed quite to it, as might occasionally be convenient; but this can be really met by slight eccentric placing of the fixation-point; while the gain in rapidity of work in all ordinary cases more than outweighs any disadvantages of the double arrangement. In testing with colors, the disk of Dr. Noyes,[1] which allows of the change of the colored disk at a touch, may be placed upon the carrier, furnishing a complete check on any deception on the part of the patient. A ready adjustment for the relative height of patient and table is made by a screw-foot (*f*) on the front of the base.

Little claim to originality can be made for the instrument, nor is it a complete fulfilment of the needs in the matter; but it is simple, efficient, and comparatively

[1] Trans. Am. Ophth. Soc., 1871, page 118.

inexpensive; and while studying out the problem of a more perfect self-registering instrument, it has seemed worth while to bring forward this simpler form to meet most of the present requirements. Simplicity has been aimed at rather than elegance; but the perimeter is neat and free from much of the cumbrousness of many others. Most of the weight is in the base and merely to give it steadiness; and the instrument may be moved about without the least difficulty and laid aside when out of use. Its cost is $10, less than one-half that of most of the simplest forms of perimeter in the market. It is constructed by Mr. Ivan Fox, of 1635 Chestnut Street, to whom is due much of the credit for the mechanical details.

1806 CHESTNUT STREET, August 27, 1884.

NEWS ITEMS.

THE CHAIR OF SURGERY IN THE SOUTHERN MEDICAL COLLEGE, Atlanta, rendered vacant by the resignation of Dr. Thad. Johnson, has been filled by the election of DR. J. MCF. GASTON, formerly of Columbia, South Carolina.

FRACTURE OF ARM BY MUSCULAR ACTION.—Dr. Amerman, of Danville, Pennsylvania, reports a case of fracture of the humerus in a base-ball pitcher, produced by muscular effort in pitching a ball to the batter in a recent game played at that place. The fracture was a transverse one, occurring between the middle and lower thirds of the arm.

SUDDEN DEATH FROM GANGRENE.—DR. M. J. B. MESSEMER writes us that, as Deputy Coroner of New York City, he has met with a great many cases of persons dying suddenly, who were affected with gangrene of the right hand or arm, caused by injury or frostbite. The gangrenous gases pass through the veins of the right arm into the vena cava and right side of the heart, causing instantaneous death by syncope or collapse. When the right side of the heart is cut into, after death, a puff of gangrenous gas can be distinctly discerned.

THE CHOLERA IN ITALY.—A special cablegram dated London, October 4, to the daily *Times*, of Philadelphia, says:

"The record of the week seems to justify the belief that the spine of the cholera epidemic has been broken and its disappearance is now only a question of weeks. It was ten weeks ago last Thursday that the first fatal case of cholera was reported in Italy and the deaths have thus far made an average of nearly a thousand weekly. It is sixteen weeks to-day since the first death was recorded in France, making about 375 deaths per week in that country.

"The mastery of the plague in Genoa is really the first fine medical feature of the whole siege. Immediately after the pest broke out with virulence in that city, a fortnight ago, the authorities had the water supply analyzed and they discovered that of three sources of supply that of the Nicolai Company was awful, the municipal works supply was pretty bad, and that of the Gerzenti Company was pure. Immense and costly efforts were promptly made to shut off the first two sources and to turn the latter water into all the pipes. An immediate improvement was noticed and the mortality declined after eight days, instead of advancing for weeks, as has usually been the case. There is a cordon around La Spezzia still, in spite of the universal protest.

"The mortality in Naples among the better classes has been more than it has been at any other visitation of recent times. It includes eleven priests, a score of nuns, and as many doctors. The temporary orphan asylum at Naples is crowded with children, and hundreds of others are privately cared for, Lady Otway having eleven in a small orphanage of her own. According to the official and municipal figures there have been 9512 deaths in Italy up to date, but people who ought to know say, that in the terrible month of September fully 1200 died at Naples alone, and a Roman paper estimates the total deaths up to Wednesday at 10,800. Out of sixty provinces in Italian mainland forty-four have been infected, but only thirteen have had more than 30 deaths, and only eight have had more than 100 deaths."

NOTES AND QUERIES.

A CORRECTION.

To the Editor of THE MEDICAL NEWS.

SIR: Dr. Sternberg has called my attention to an error of quotation in my article on "Chlorine," in THE NEWS of Sept. 27th, p. 343, in regard to the germicide and restraining powers of alcohol. The corrected statement reads 40 per cent., 95 per cent., 20 per cent., 10 per cent., instead of 0.40–.95, 0.20–.10 as presented by an oversight in my paper.

Very respectfully yours,

RICHARD MCSHERRY, M.D.

BALTIMORE, Oct. 2, 1884.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM SEPTEMBER 30 TO OCTOBER 6, 1884.

CLEMENTS, B. A., *Major and Surgeon.*—In addition to present duties, to take charge of the office of the Medical Director of the Department during the temporary absence of that officer.—*Par. 1, S. O. 195, Department of the Missouri*, September 29, 1884.

BENTLEY, EDWIN, *Major and Surgeon.*—Granted two months' leave of absence, with permission to apply for two months' extension, to take effect upon assignment to duty in Department of Texas of Surgeon F. L. Town.—*S. O. 121, Headquarters Division of the Missouri*, September 30, 1884.

BARTHOLF, JOHN H., *Captain and Assistant Surgeon.*—Assigned to duty at Fort Ringgold, Texas, as Post Surgeon.—*Par. 5, S. O. 129, Headquarters Department of Texas*, September 25, 1884.

CRONKHITE, HENRY M., *Captain and Assistant Surgeon.*—Assigned to duty as Post Surgeon at Fort Reno, Indian Territory.—*S. O. 197, Department of the Missouri*, October 2, 1884.

CRAMPTON, L. W., *Captain and Assistant Surgeon.*—Granted leave of absence for one month and ten days.—*S. O. 60, Headquarters Division of the Atlantic*, October 2, 1884.

GIBSON, A. J., *First Lieutenant and Assistant Surgeon.*—Assigned to duty as Post Surgeon Fort Winfield Scott, California, relieving Assistant Surgeon A. S. Polhumus.

POLHUMUS, A. S., *First Lieutenant and Assistant Surgeon.*—Upon being relieved, to report to Commanding Officer Fort McDermit, Nevada, as Post Surgeon.

WHITE, R. H., *Captain and Assistant Surgeon.*—To report to Commanding Officer Angel Island, California, as Post Surgeon, relieving Assistant Surgeon C. K. Winne.

WINNE, C. K., *Captain and Assistant Surgeon.*—Upon being relieved, to report to Commanding Officer Benicia Barracks, California, for duty as Post Surgeon, relieving Surgeon C. C. Byrne.—*Par. 1, S. O. 115, Headquarters Department of California*, September 23, 1884.

EVERTS, EDWARD, *First Lieutenant and Assistant Surgeon.*—Granted leave of absence for one month, with permission to leave the limits of the Department.—*S. O. 145, Headquarters Department of California*, September 24, 1884.

BLACK, C. S., *First Lieutenant and Assistant Surgeon.*—Granted leave of absence for fifteen days, to take effect this date.—*Par. 3, S. O. 131, Department of Texas*, September 29, 1884.